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Dunn et al.

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(54) **MULTI-COMPARTMENT CONTAINER WITH FLEXIBLE PARTITION**

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A47G 19/02 (2006.01)

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USPC 222/129, 543, 538, 144.5, 142.1; 220/831, 832, 254.2, 254.3, 713, 717
See application file for complete search history.

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(22) Filed: **Oct. 29, 2015**

(56) **References Cited**

(65) **Prior Publication Data**

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U.S. PATENT DOCUMENTS

331,415 A 1/1885 Cleveland
1,817,562 A 8/1931 Hodge
1,896,827 A 2/1933 Neely
2,016,488 A 10/1935 Eckhaus
2,502,449 A 4/1945 Garberding
2,734,306 A 2/1956 Holdeman
2,774,466 A 12/1956 Liska
2,953,242 A 9/1960 Shaw

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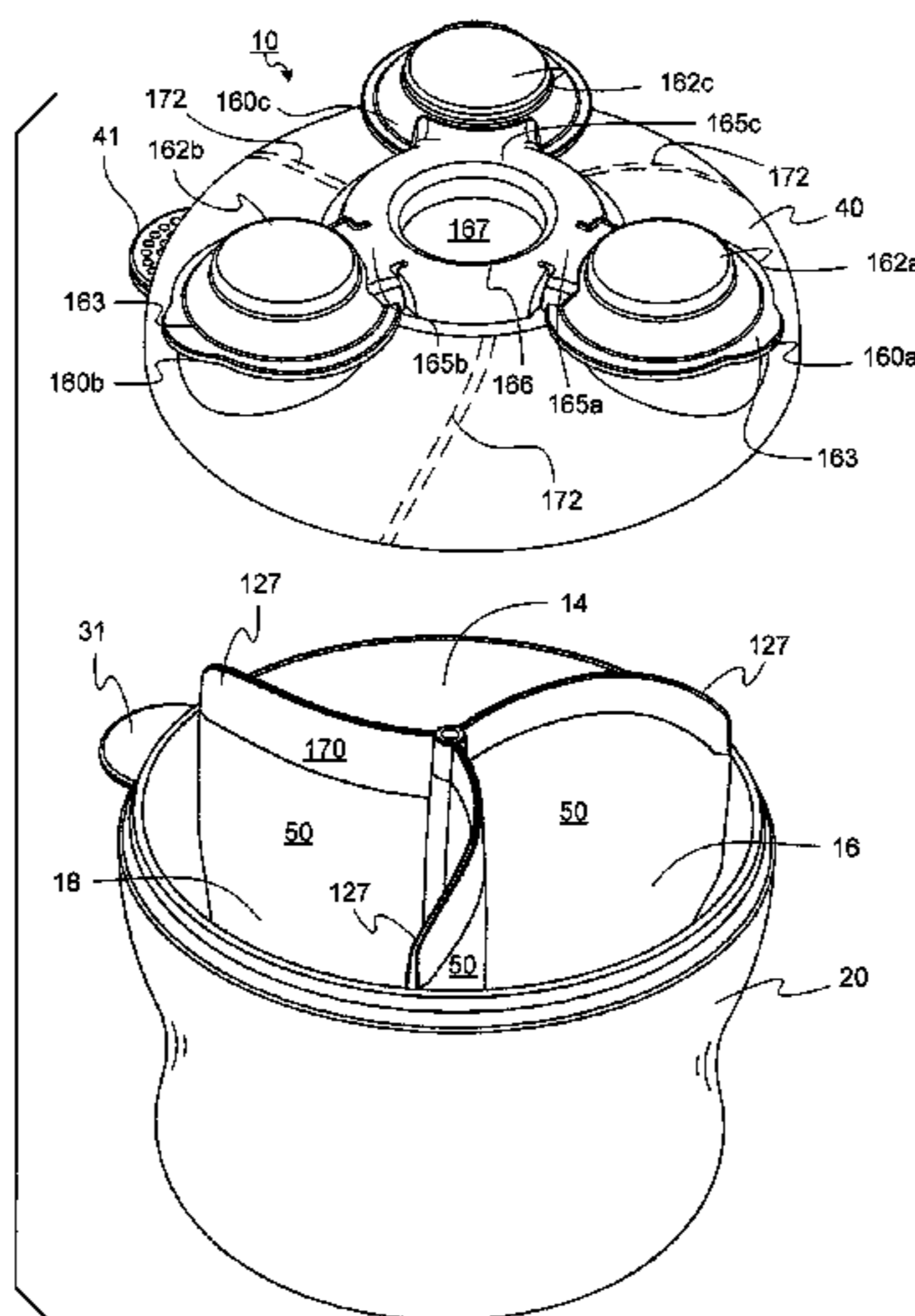
(51) **Int. Cl.**

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B65D 43/02 (2006.01)
B65D 55/16 (2006.01)
B65D 25/04 (2006.01)
A47J 47/01 (2006.01)
A47J 47/04 (2006.01)
A47G 11/00 (2006.01)

(57) **ABSTRACT**

A dispensing cover having a lid with at least one spout and a spout cover hingedly connected to a base. The base is attached to the lid and has a recess adapted to receive and secure via a friction fit a portion of the spout cover in an open position.

19 Claims, 23 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

3,052,368	A	9/1962	Atkins et al.	7,090,072	B1	8/2006	Elliott
3,144,152	A	8/1964	Kopp	7,806,298	B2	10/2010	Kraus et al.
3,334,731	A	8/1967	Dale	8,777,044	B1 *	7/2014	Raymus A47G 19/2272 215/12.1
4,261,468	A	4/1981	Krebs	2003/0234062	A1 *	12/2003	Wei A47J 47/01 141/319
4,993,584	A *	2/1991	Macario A47G 19/32 220/523	2007/0039960	A1 *	2/2007	Pawlik B65D 51/18 220/254.7
5,415,312	A *	5/1995	Mueller B65D 47/089 220/254.3	2009/0188929	A1 *	7/2009	Sims A47G 19/2205 220/710
D376,734	S	12/1996	Petrie	2014/0144926	A1 *	5/2014	Wolf A47J 47/01 222/241

* cited by examiner

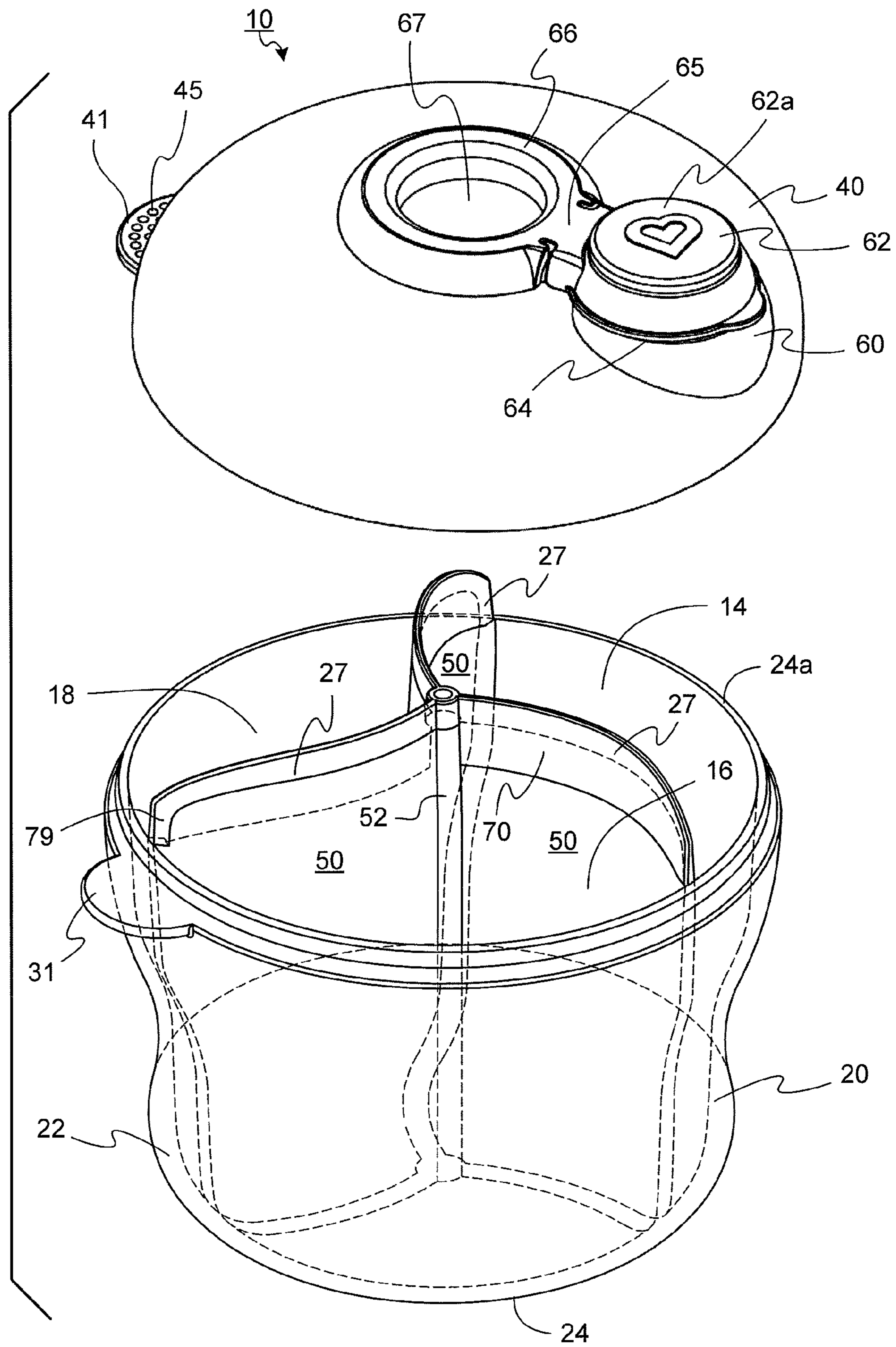


FIG. 1

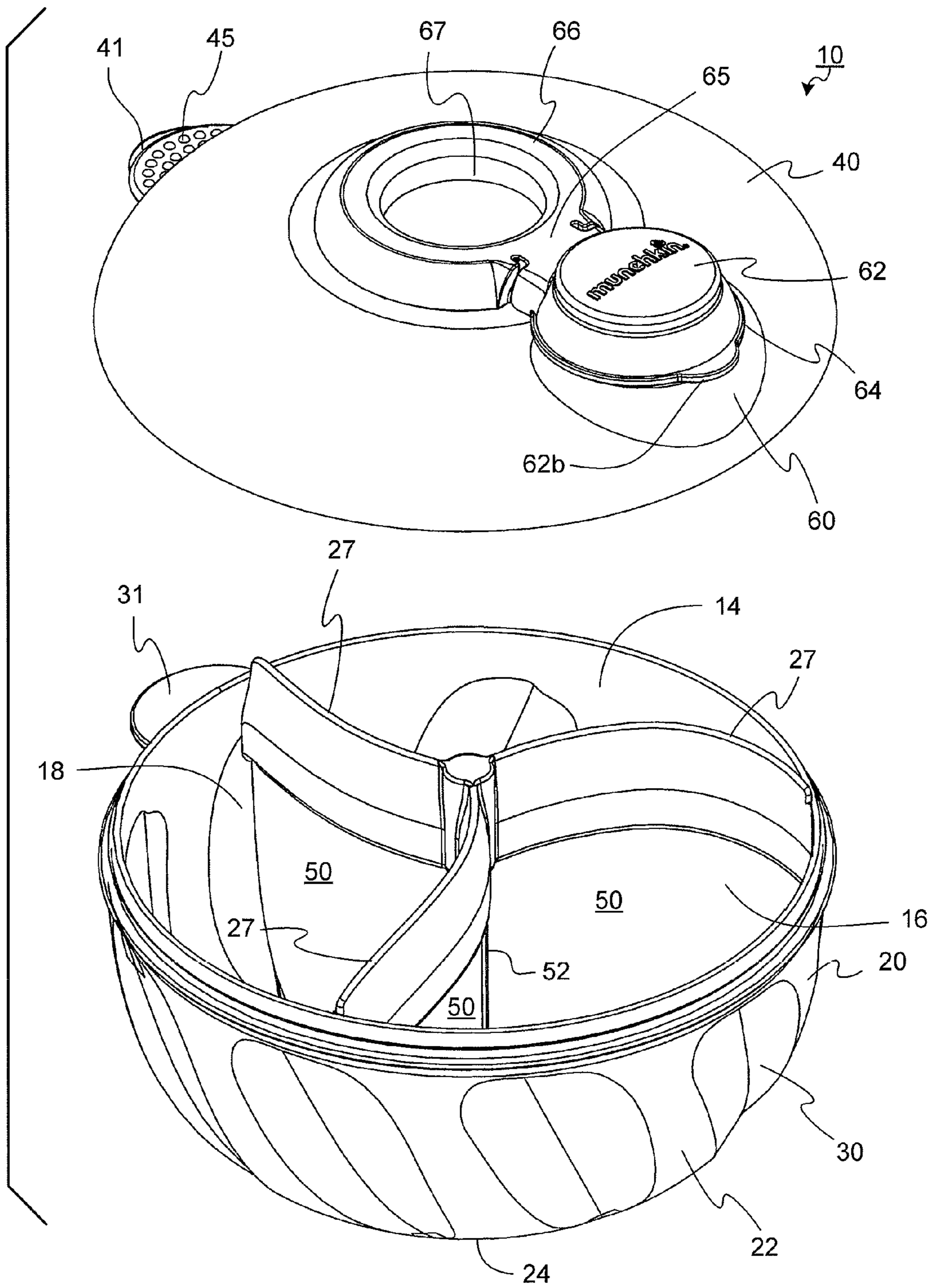


FIG. 2

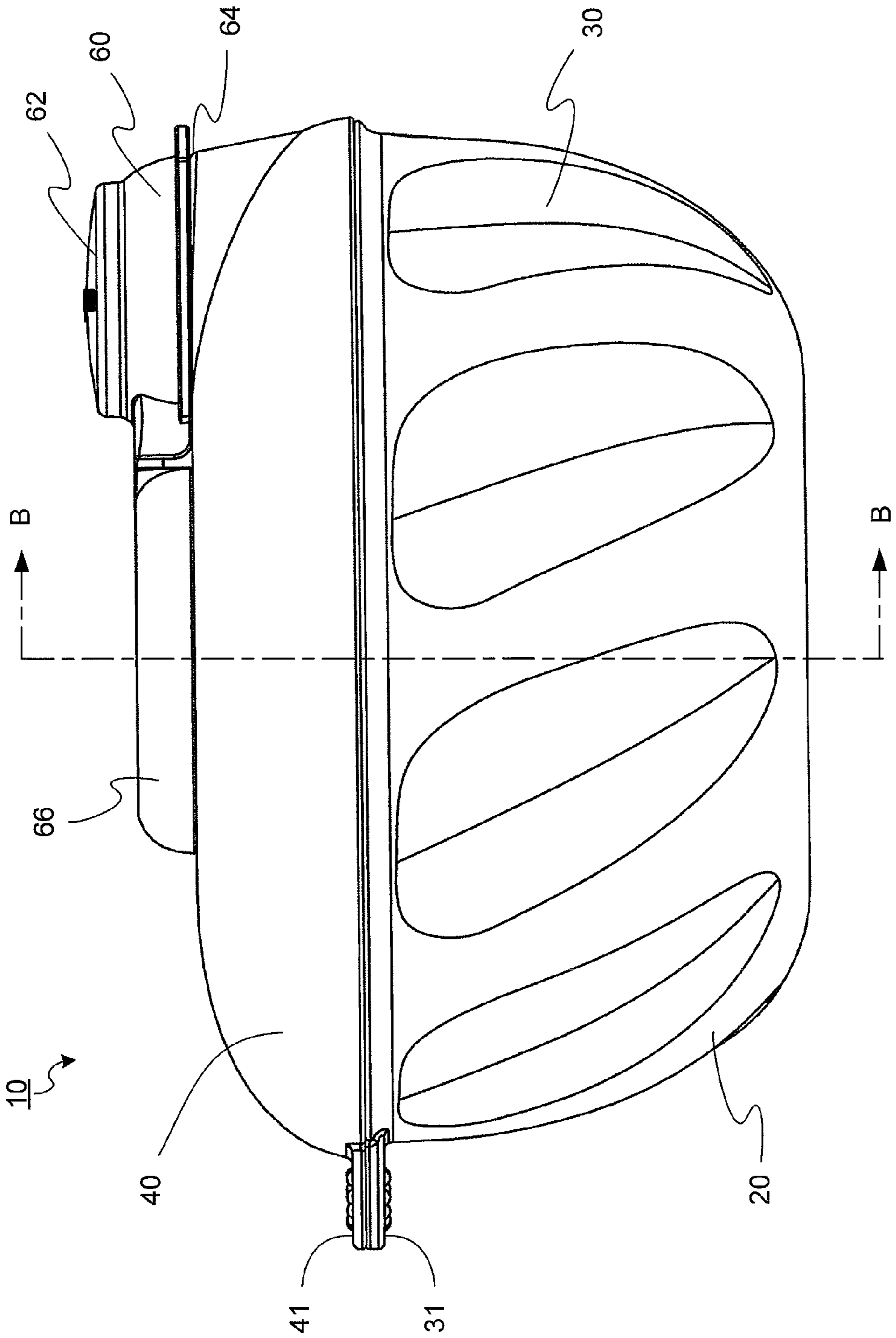


FIG. 3

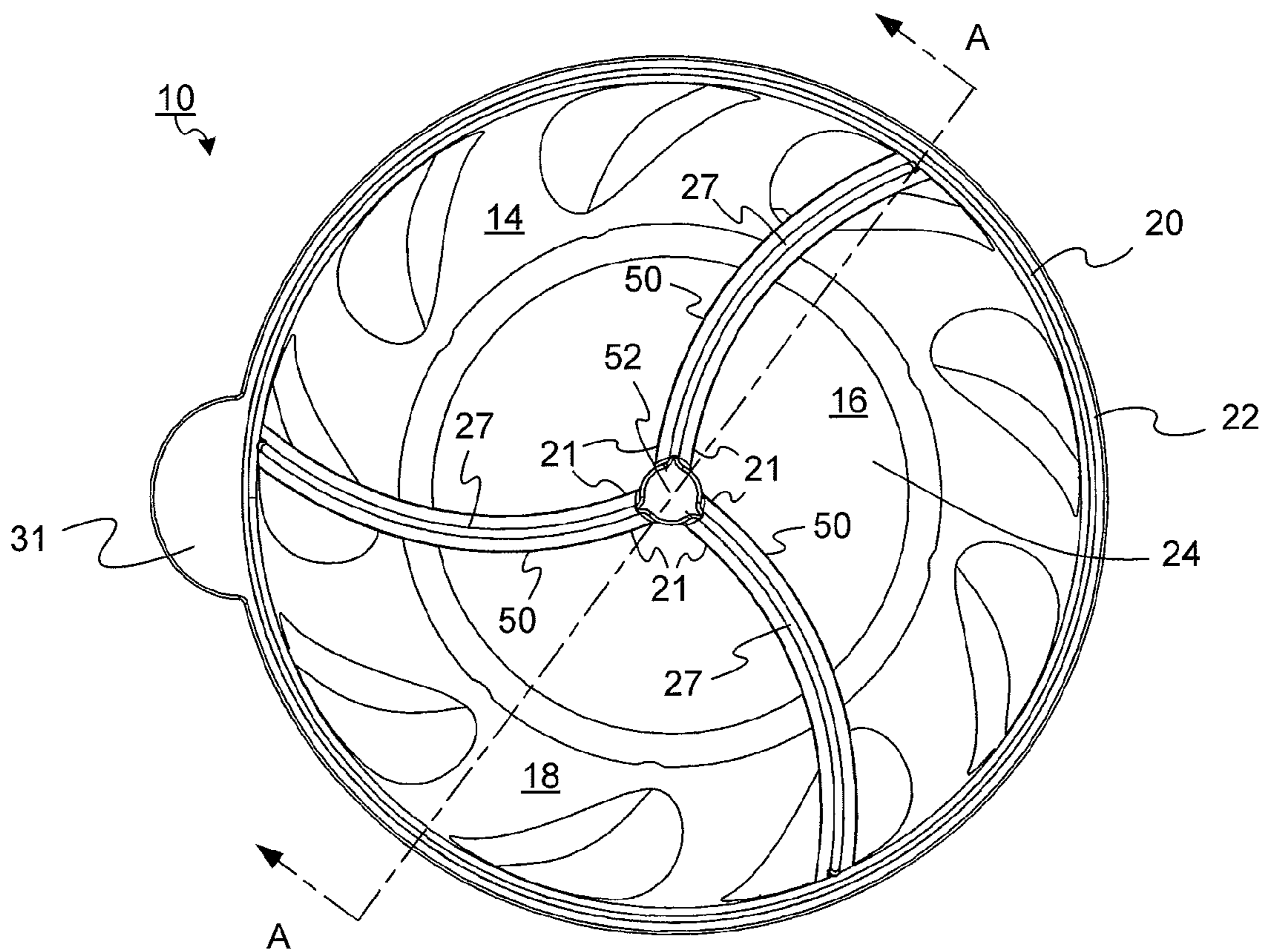


FIG. 4

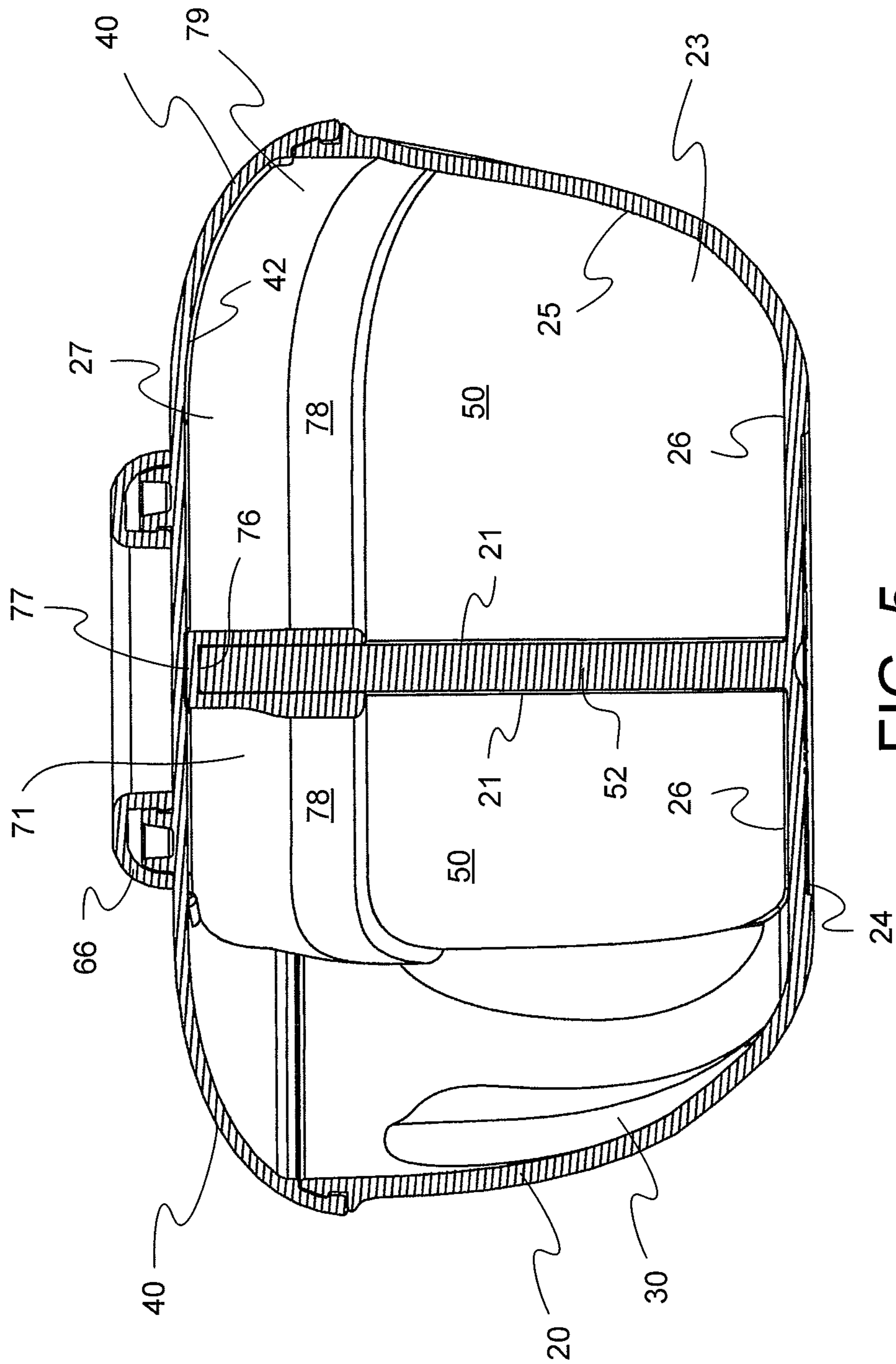


FIG. 5

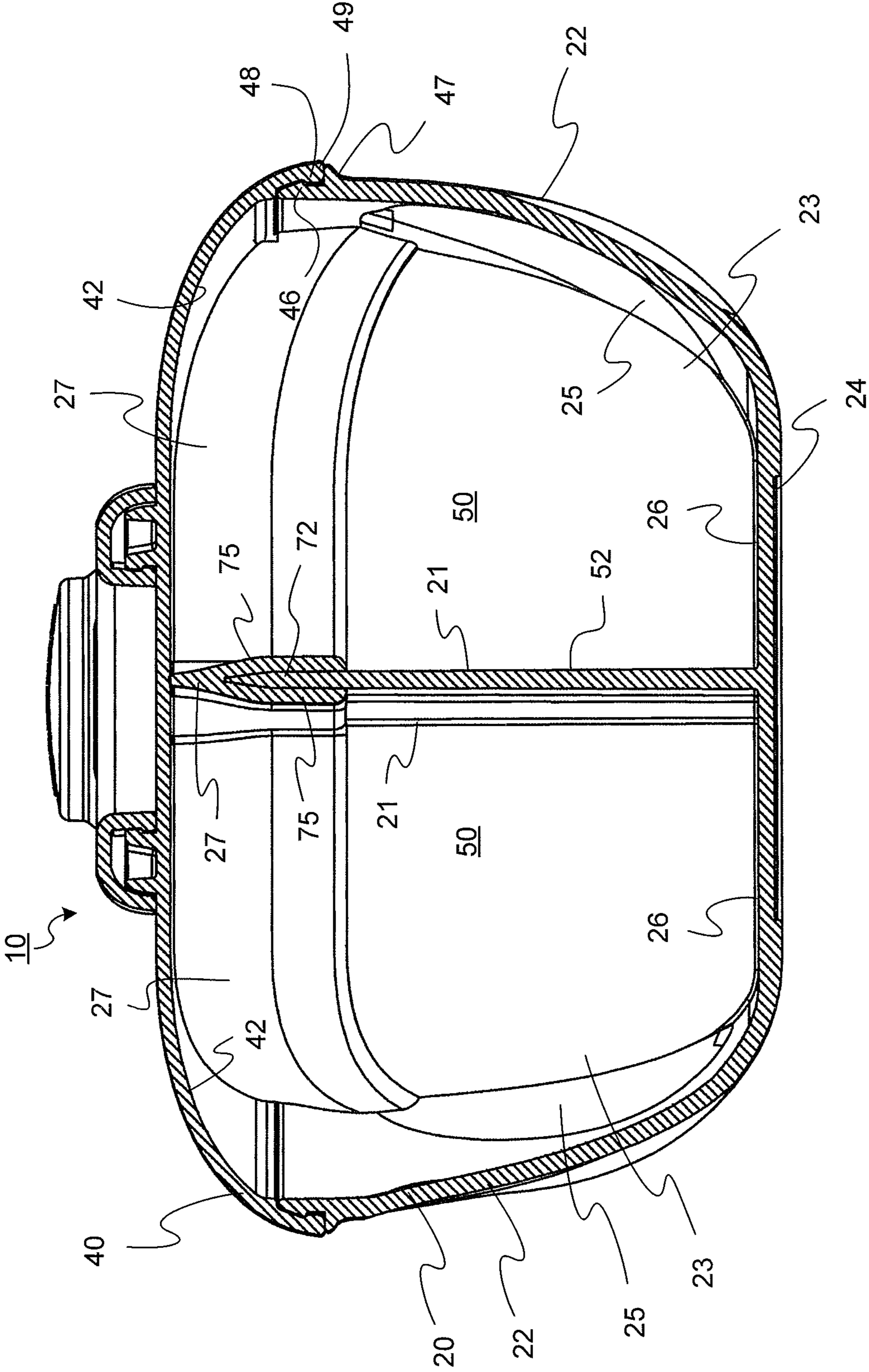


FIG. 6

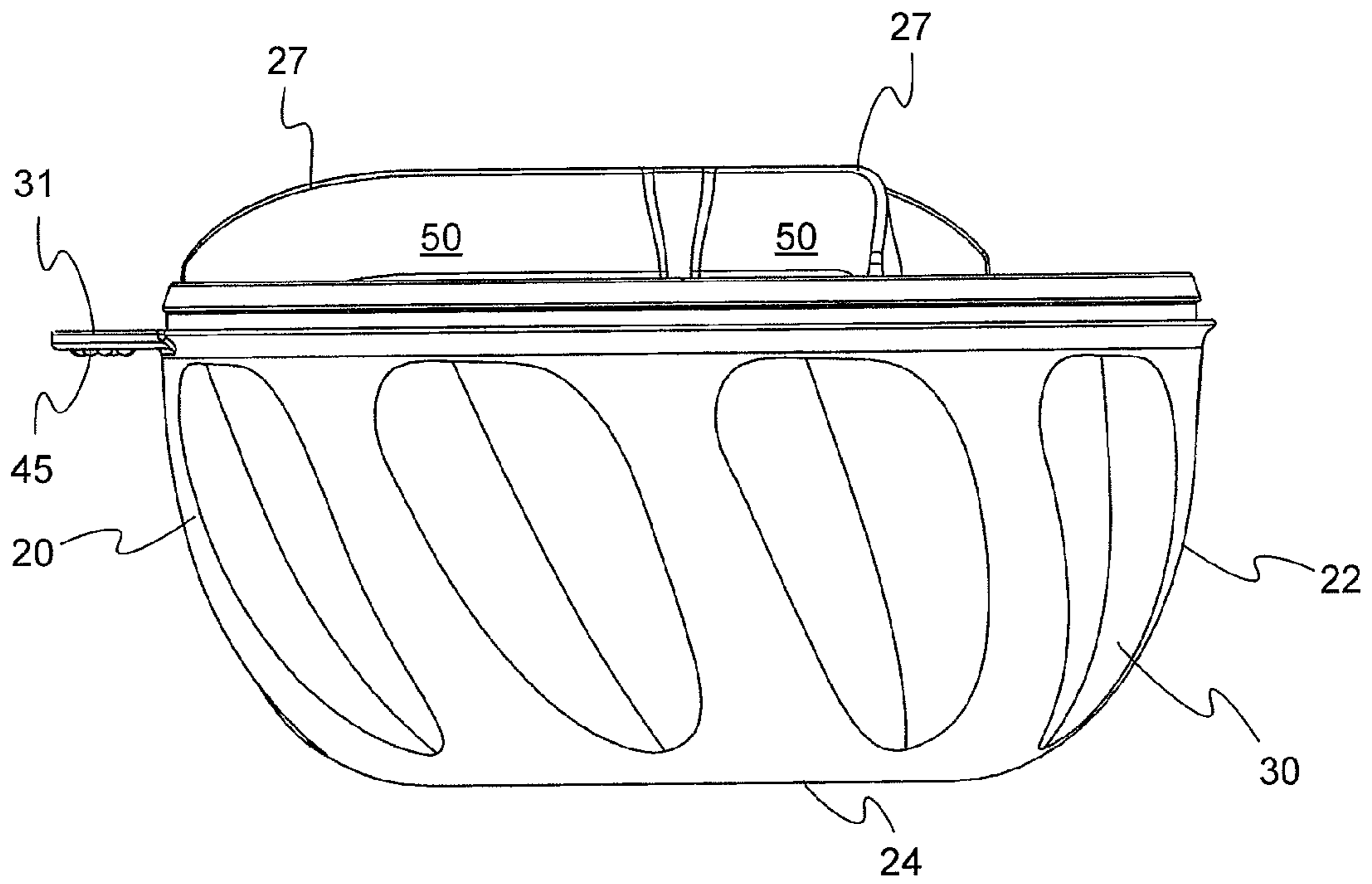


FIG. 7

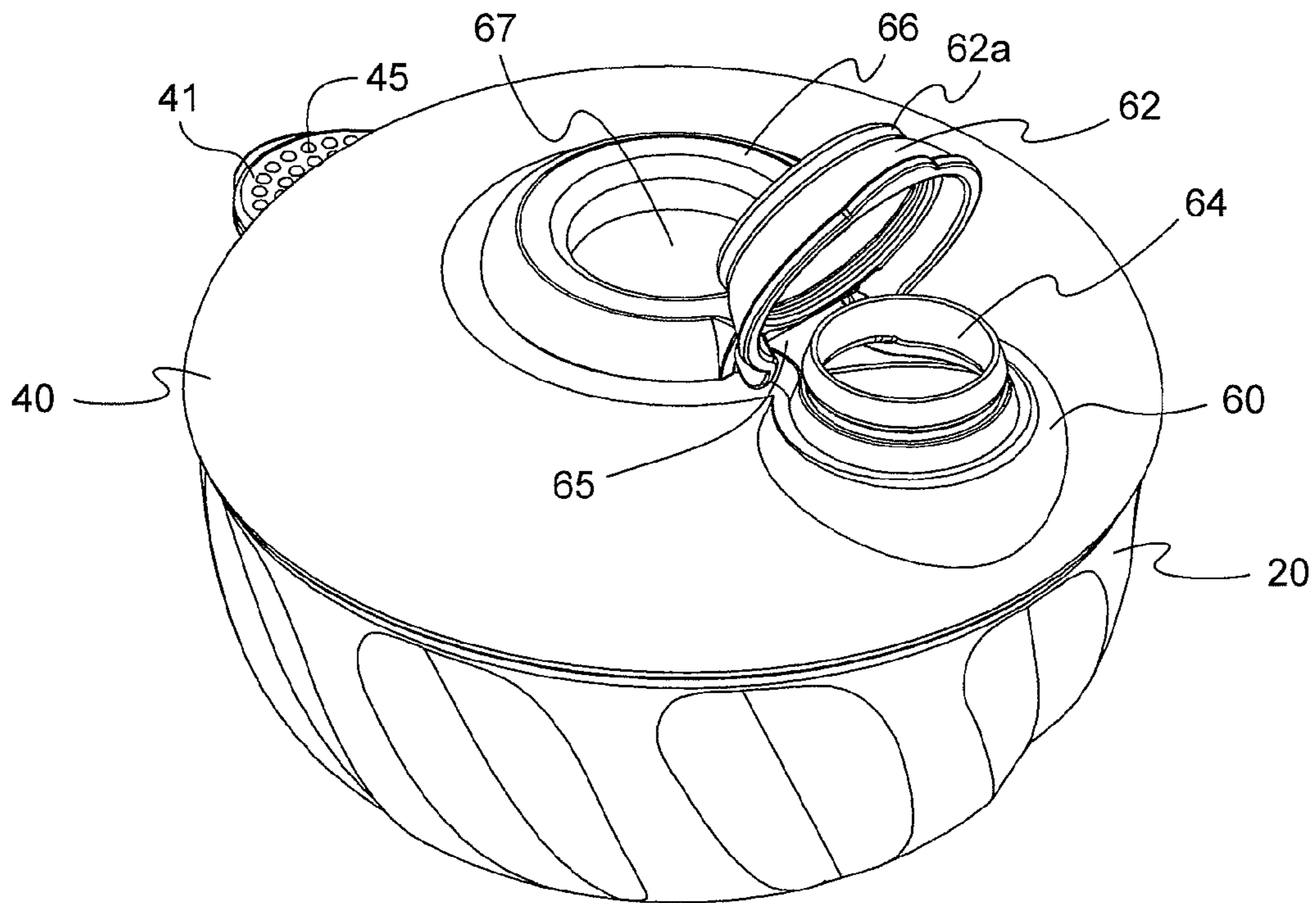


FIG. 8

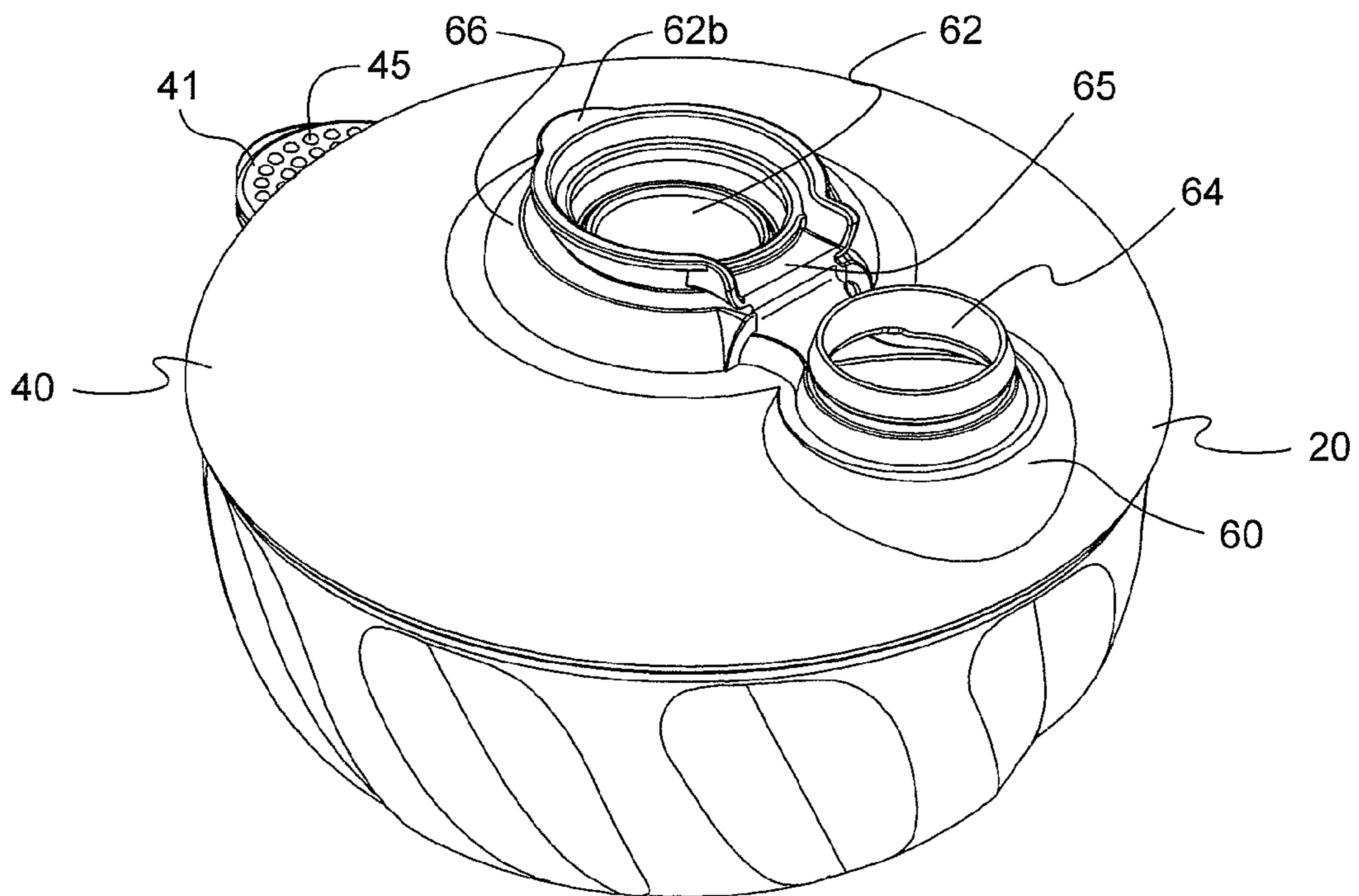


FIG. 9

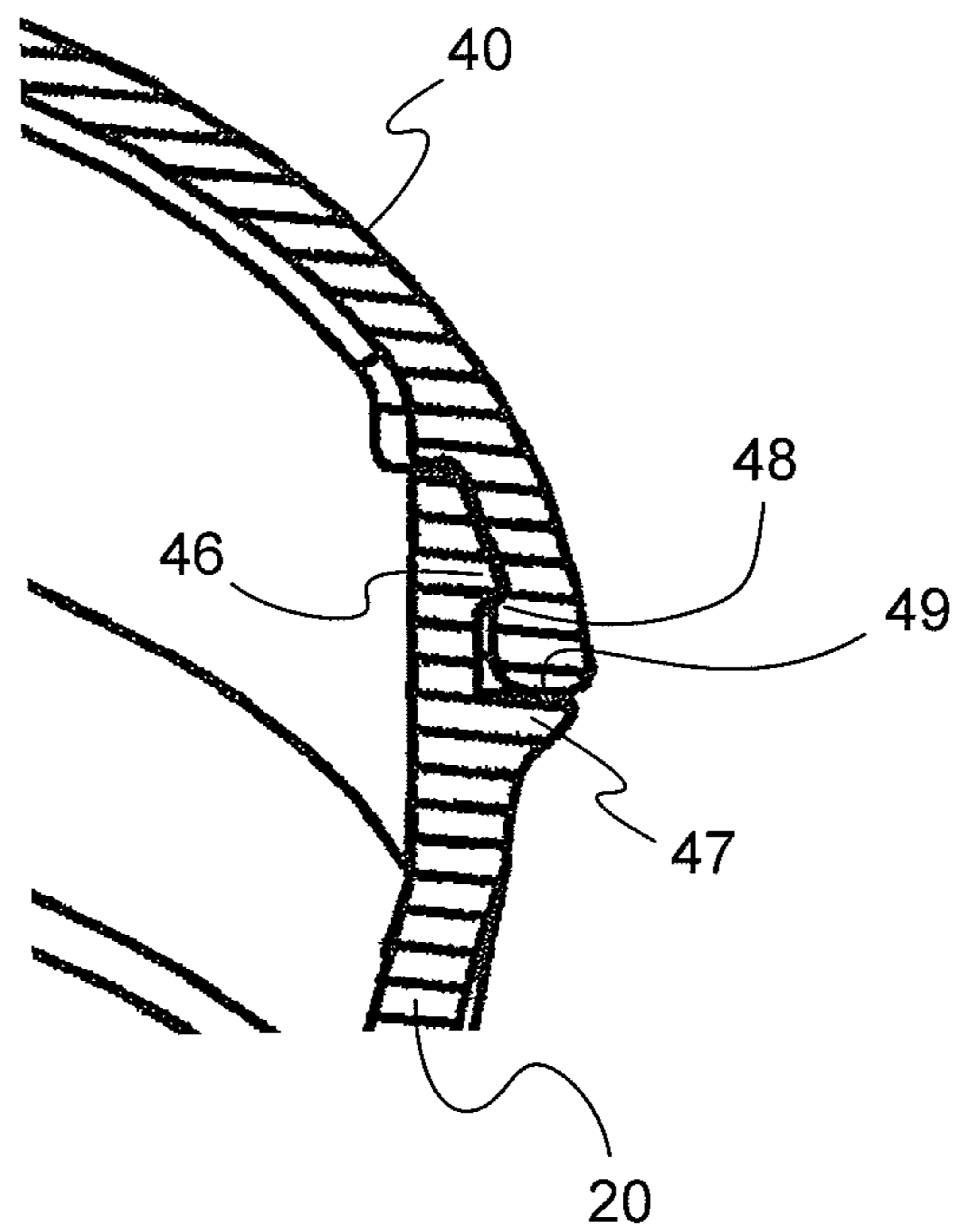


FIG. 10

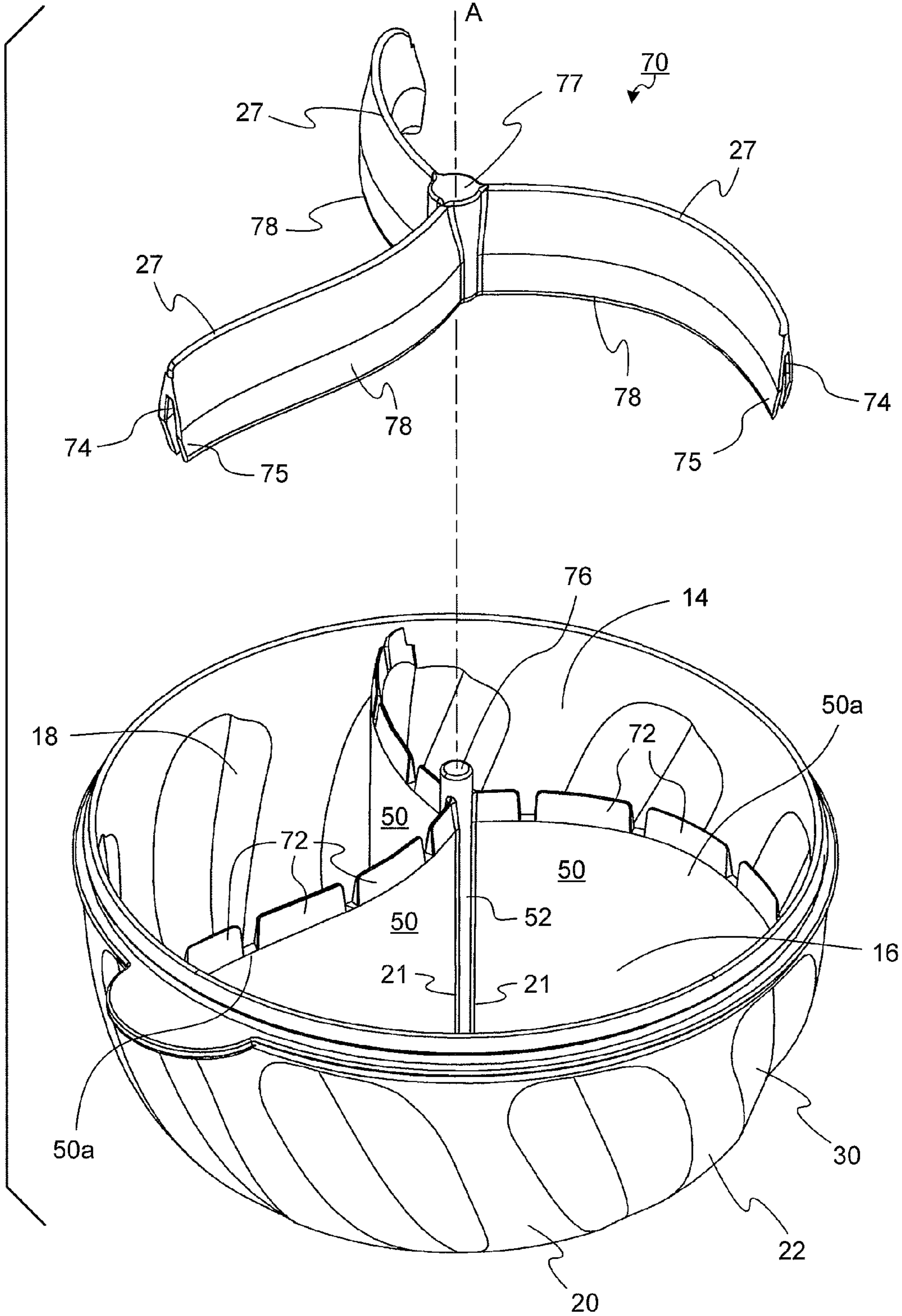


FIG. 11

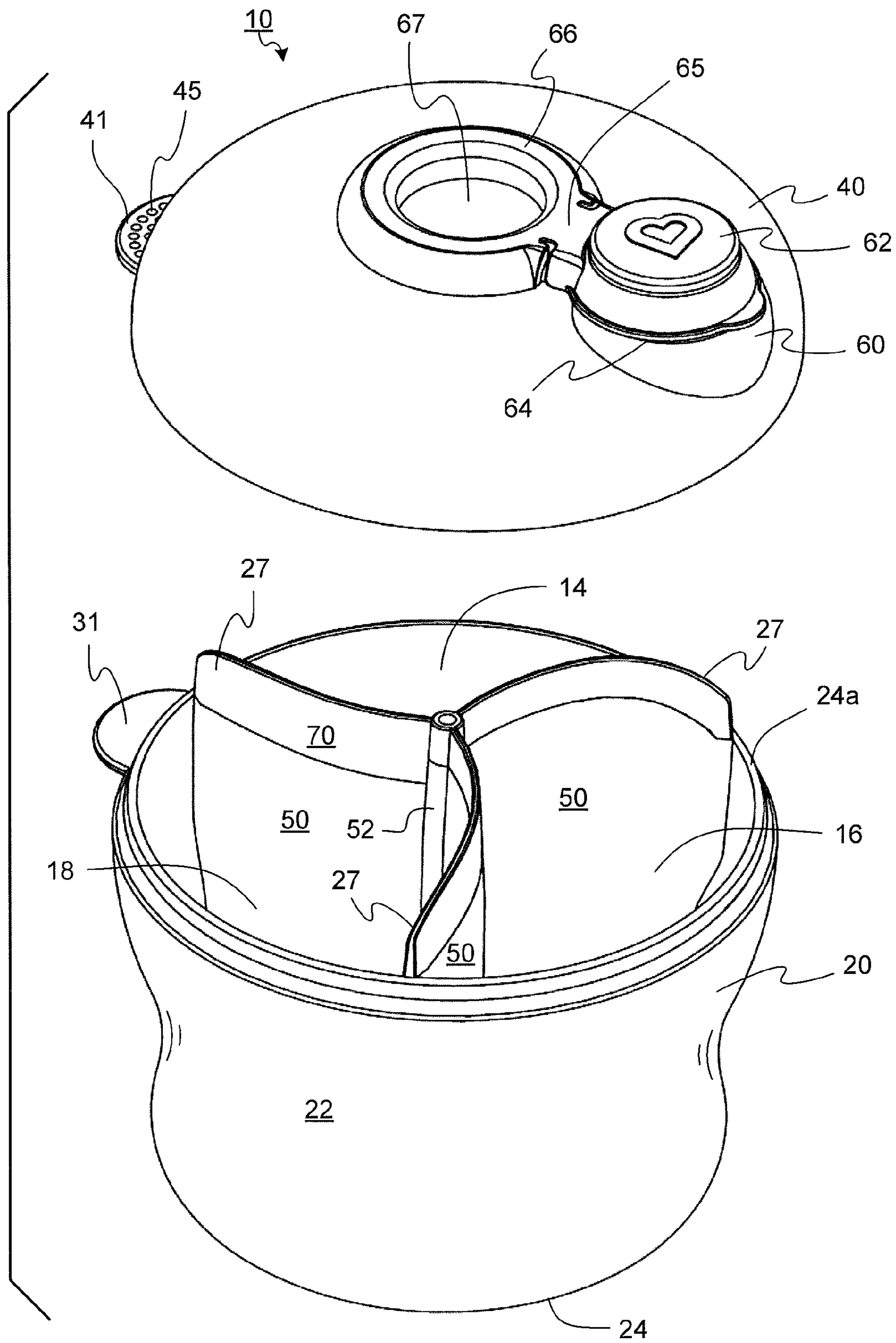


FIG. 12

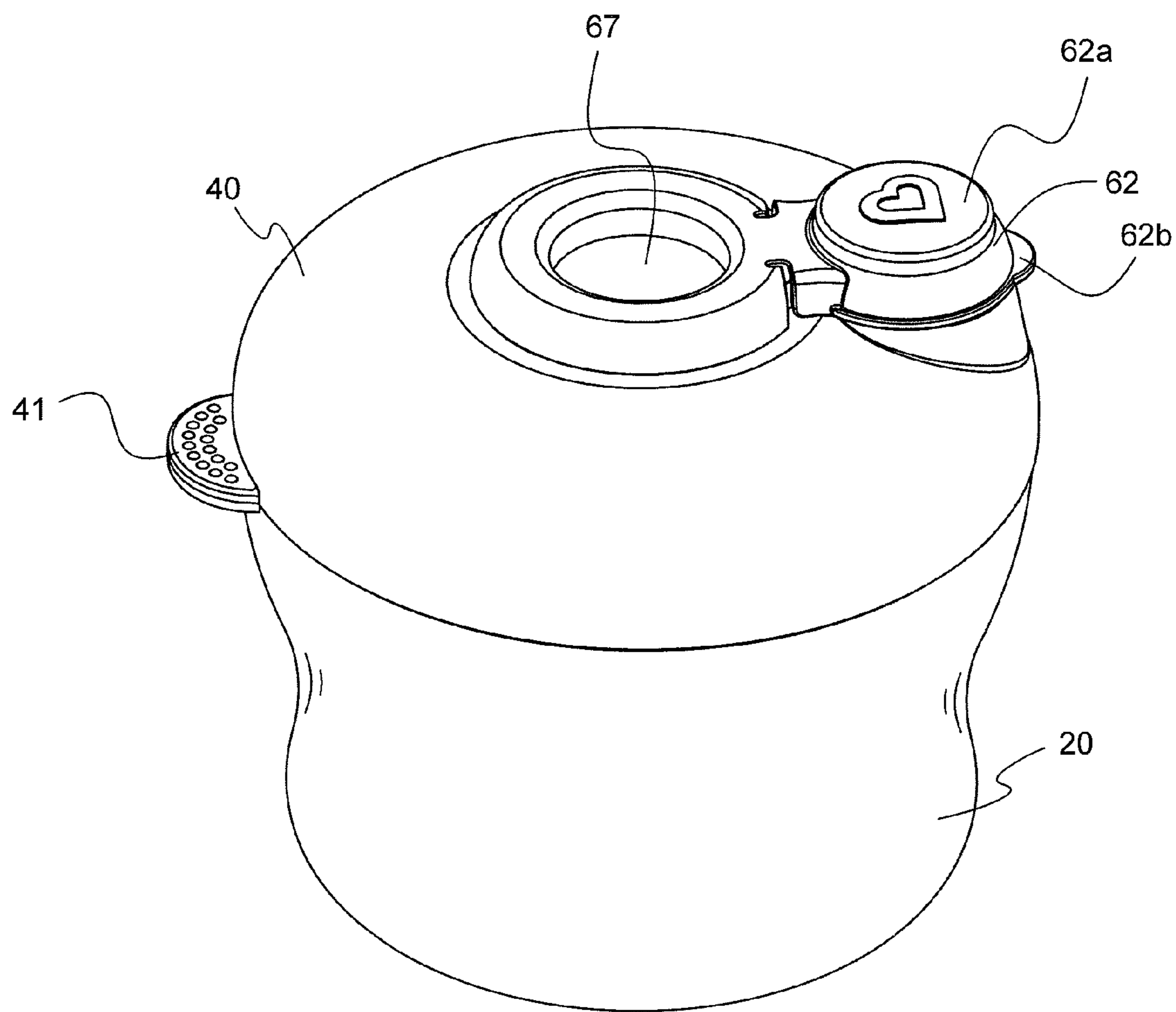


FIG. 13

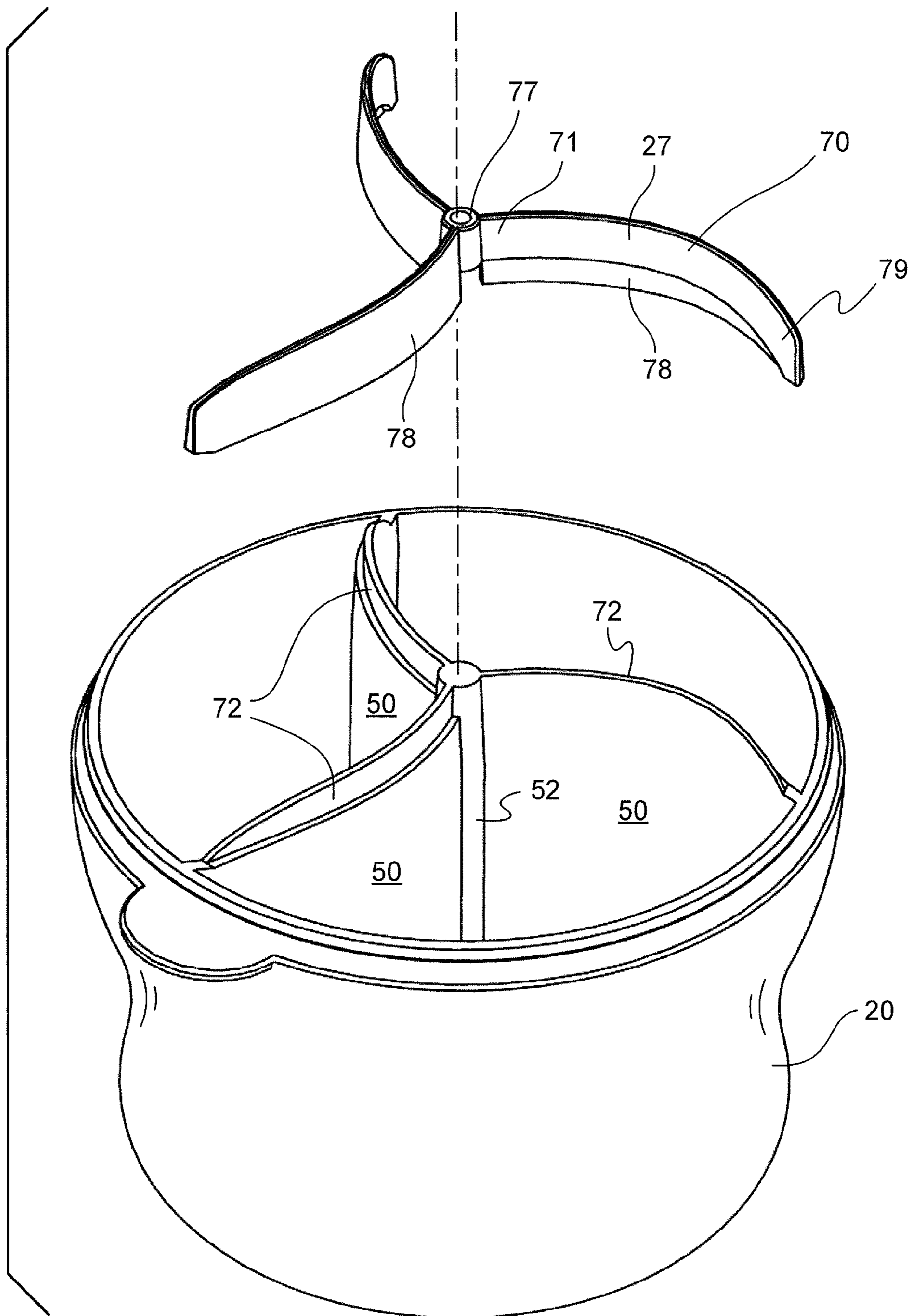


FIG. 14

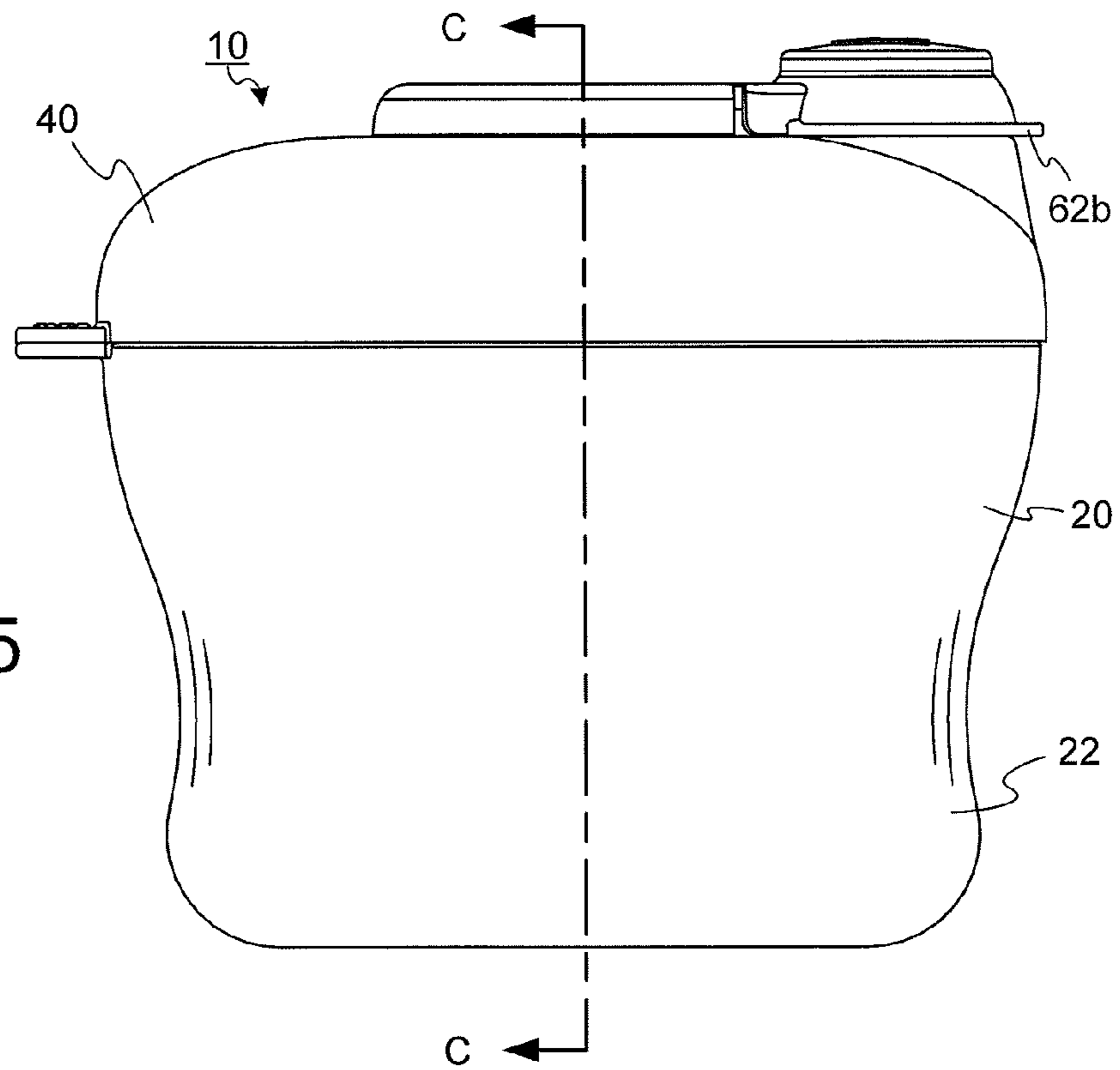


FIG. 15

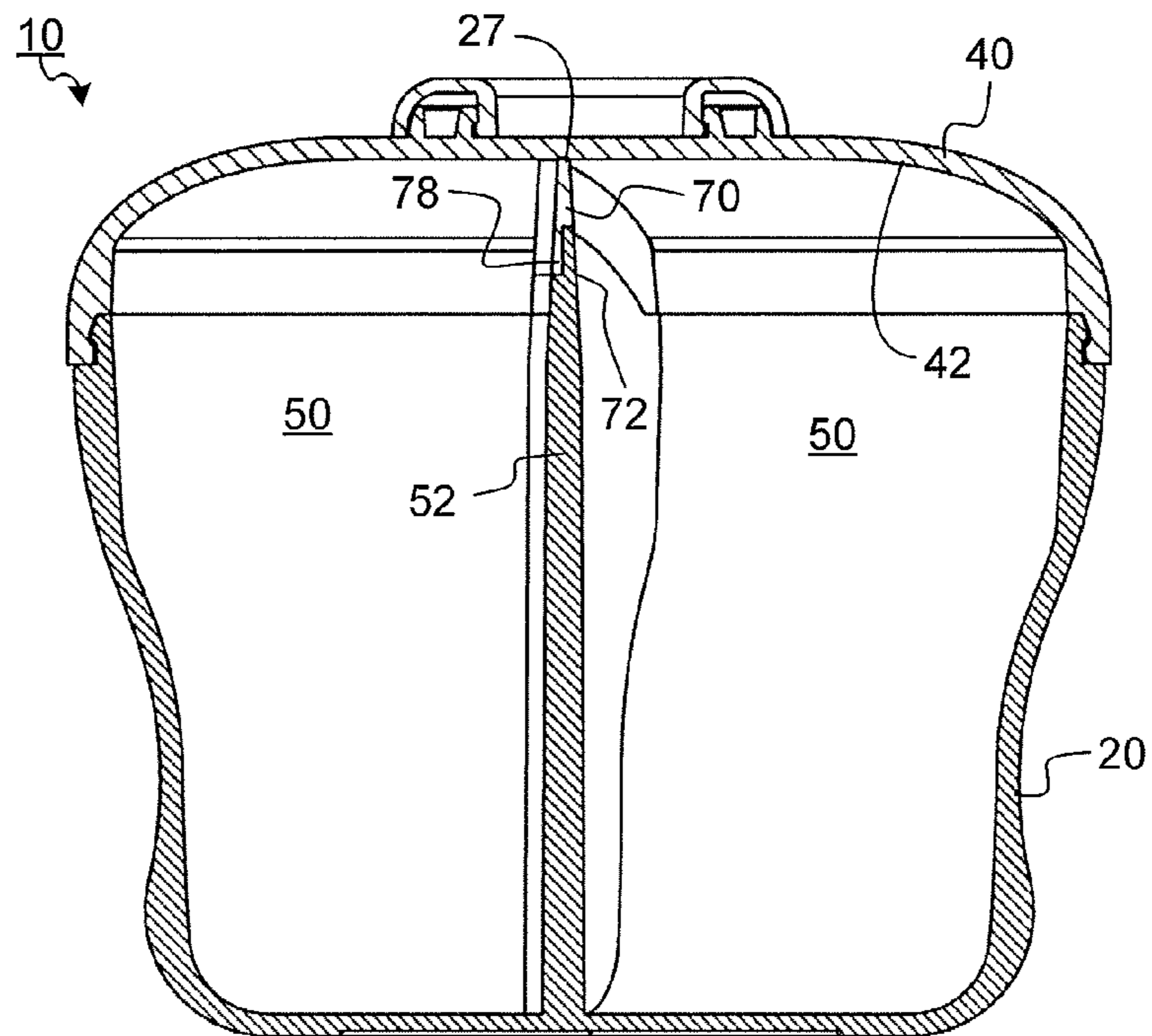


FIG. 16

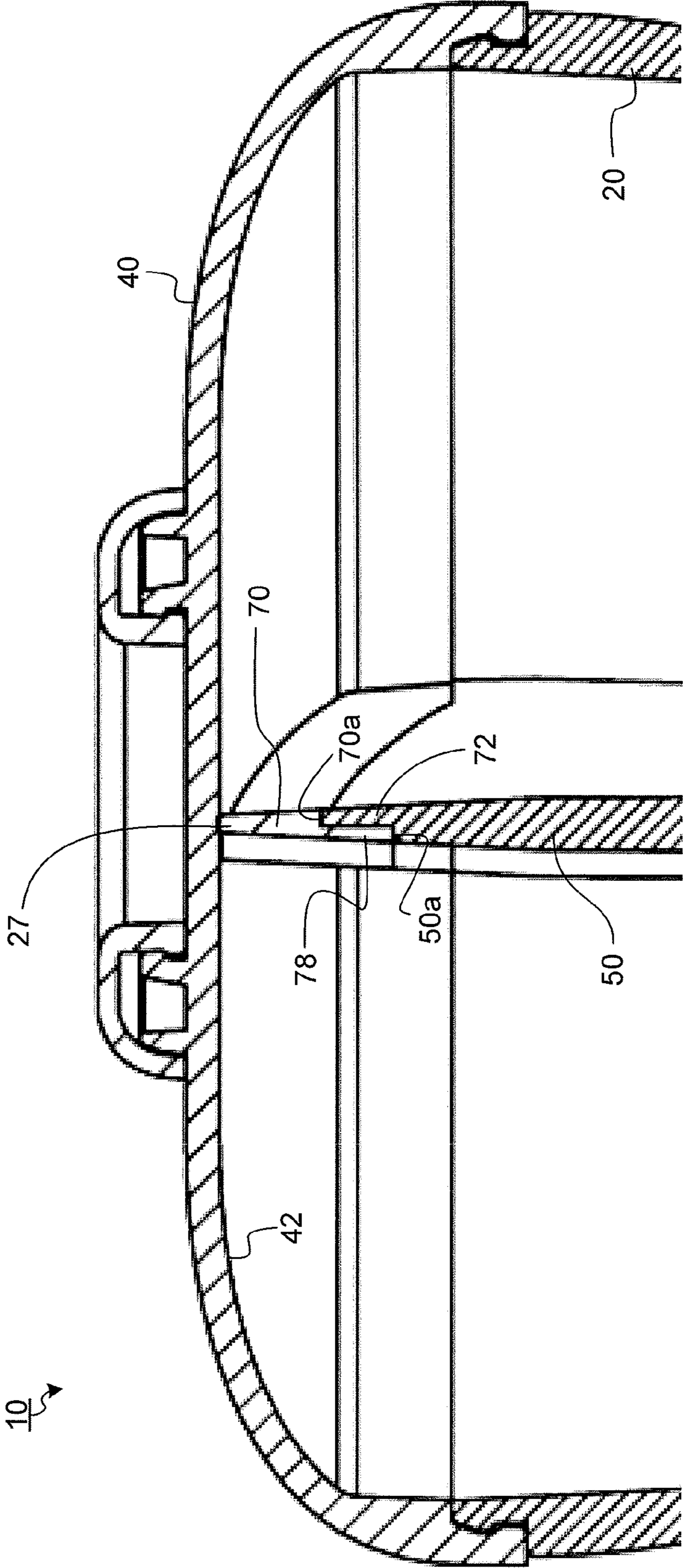


FIG. 17

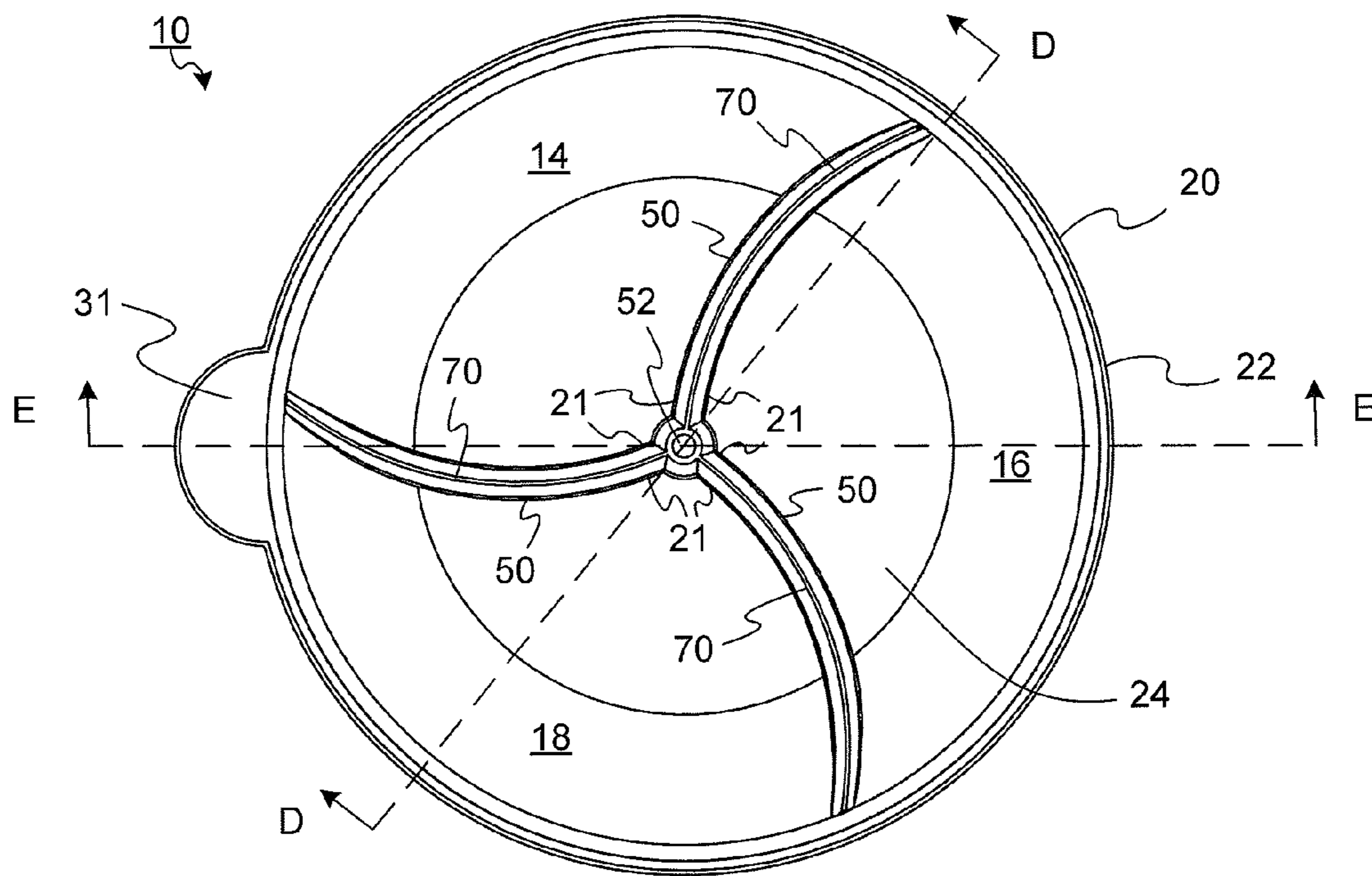


FIG. 18

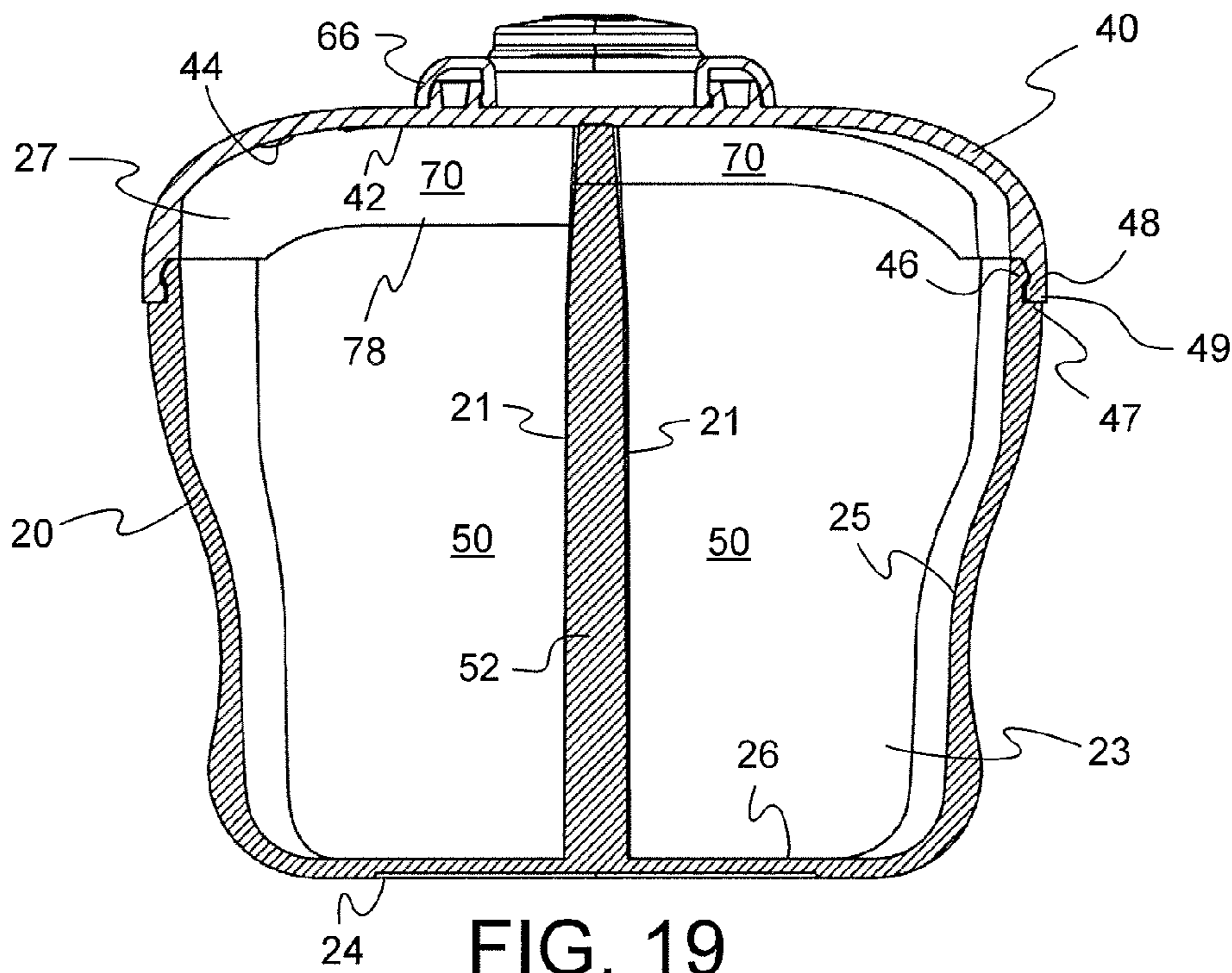


FIG. 19

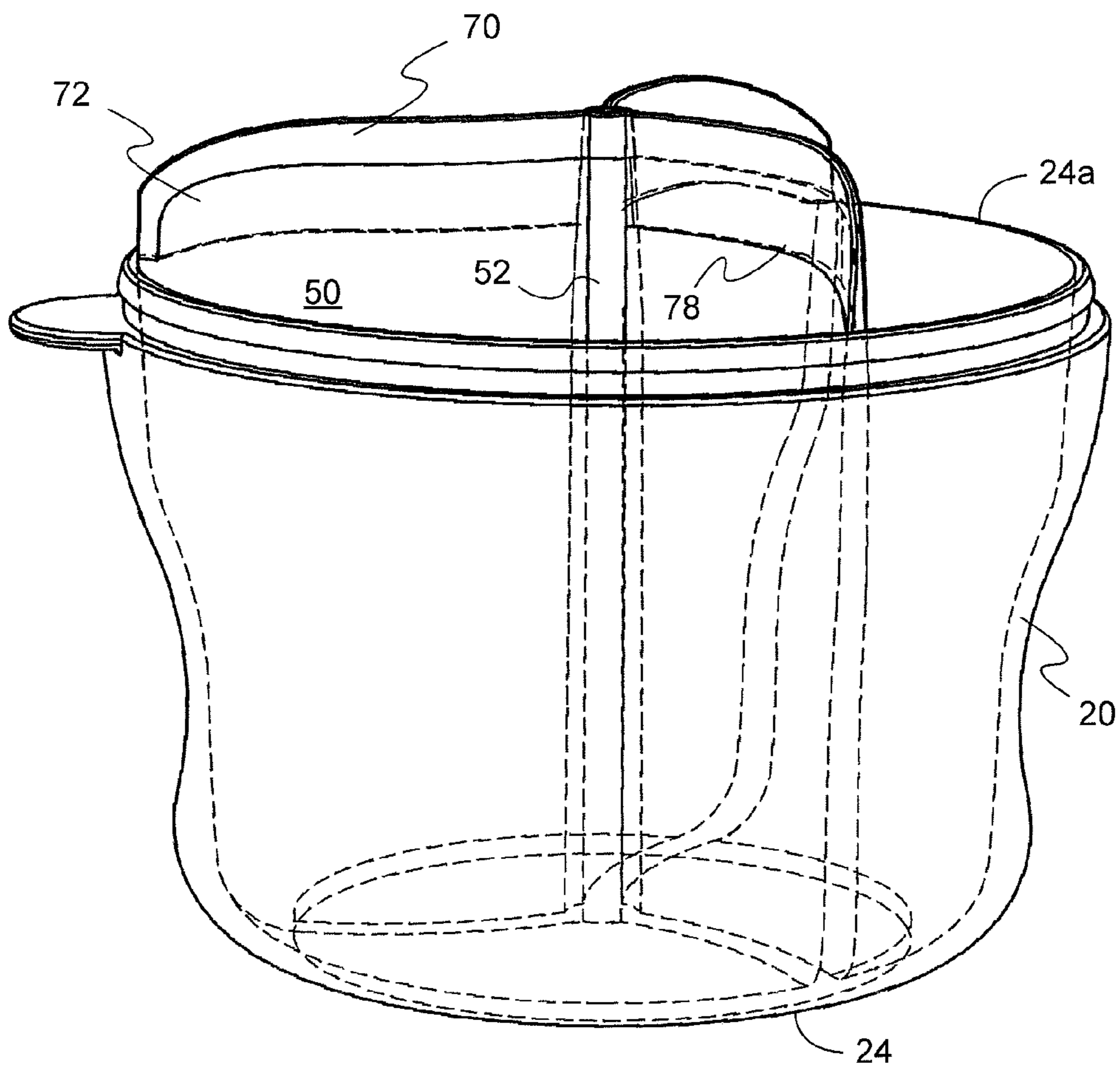


FIG. 20

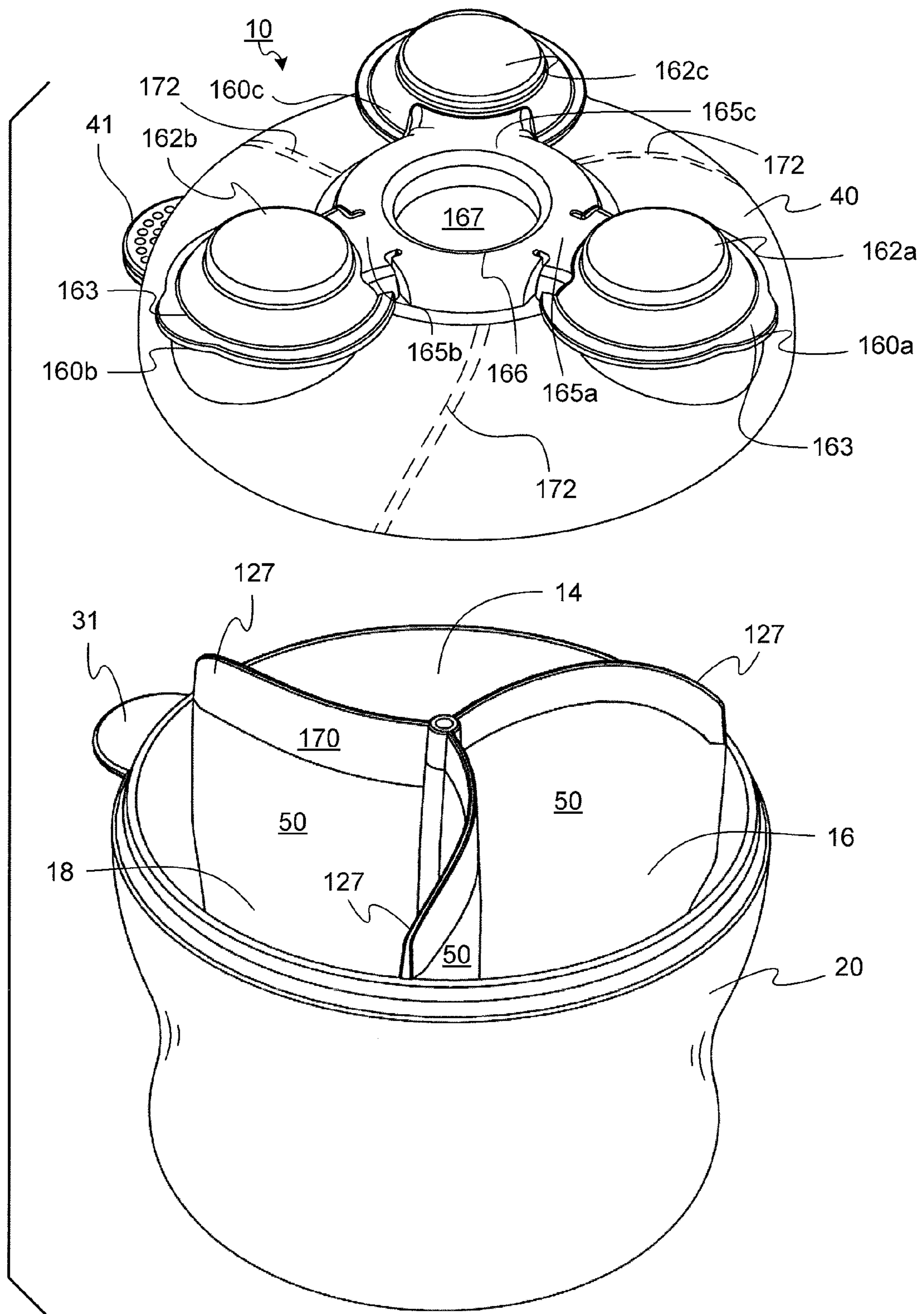


FIG. 21

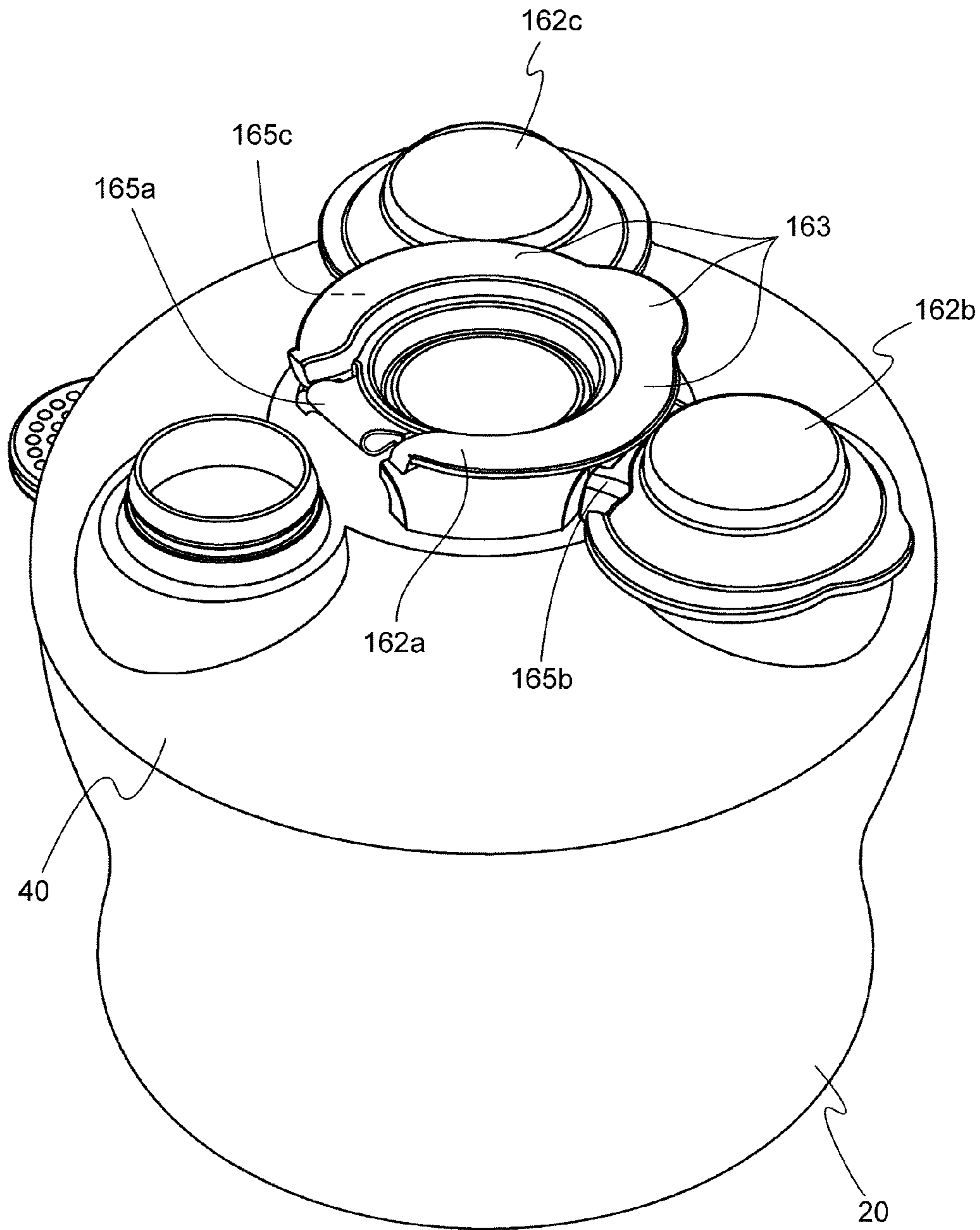


FIG. 22

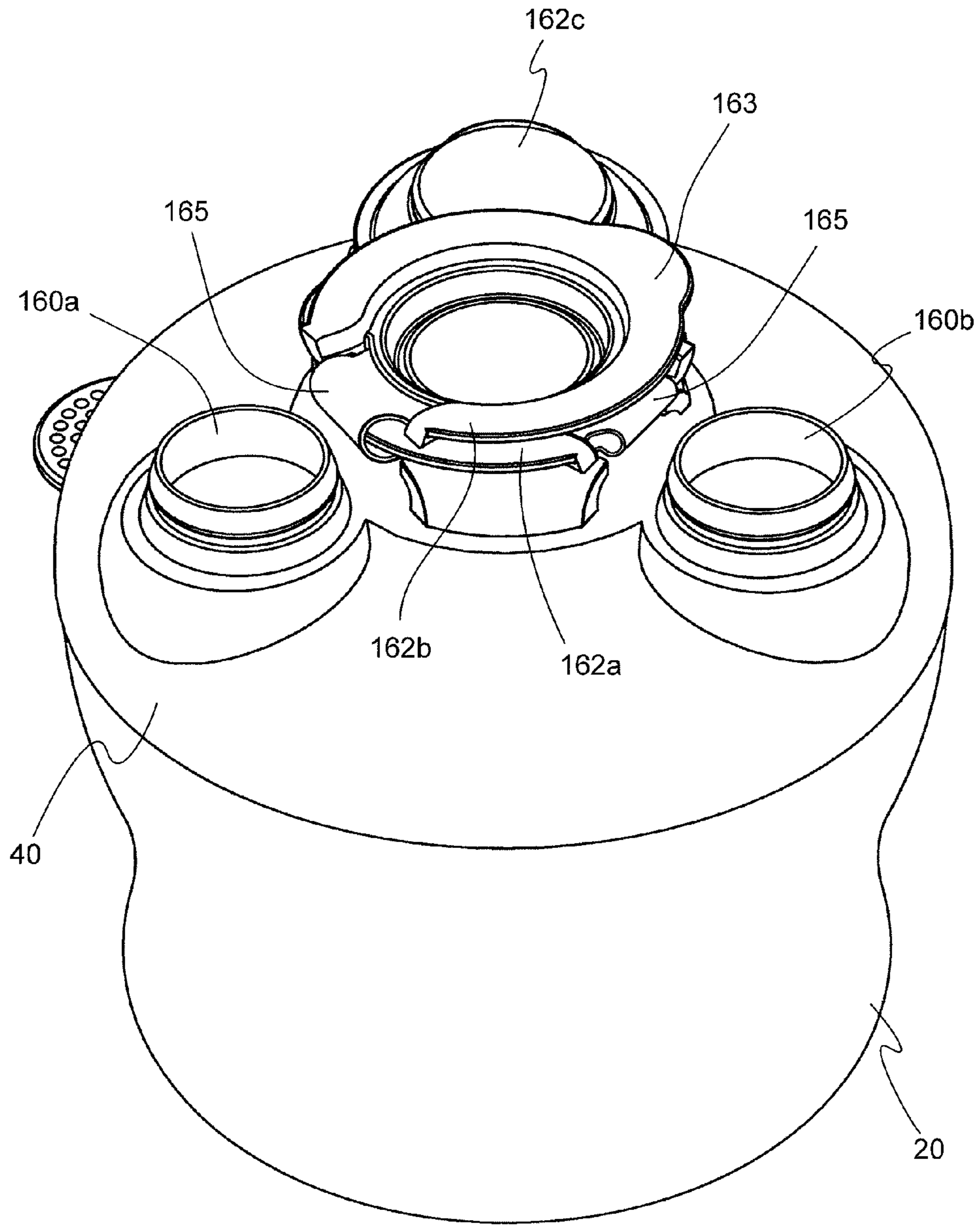


FIG. 23

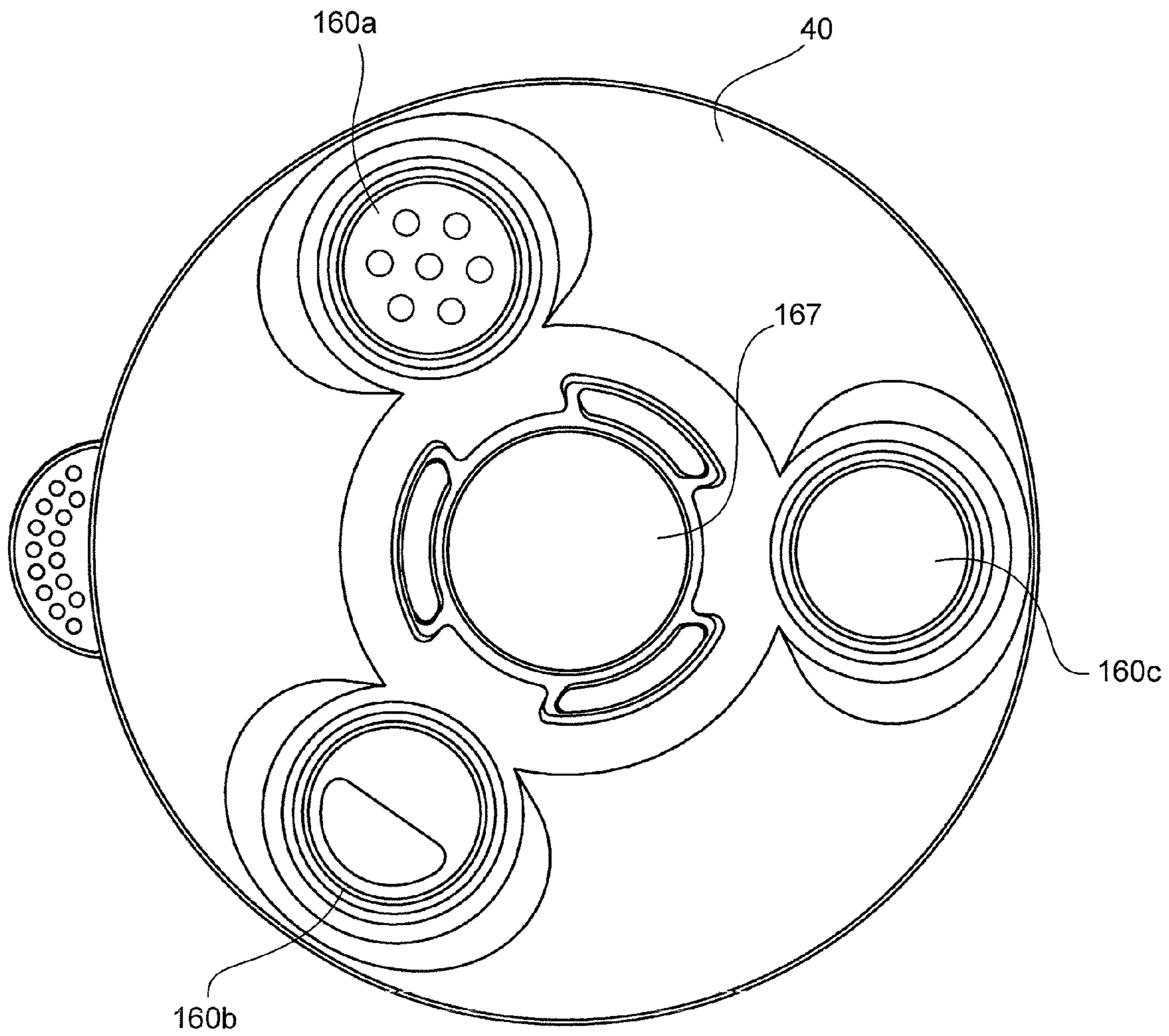


FIG. 24

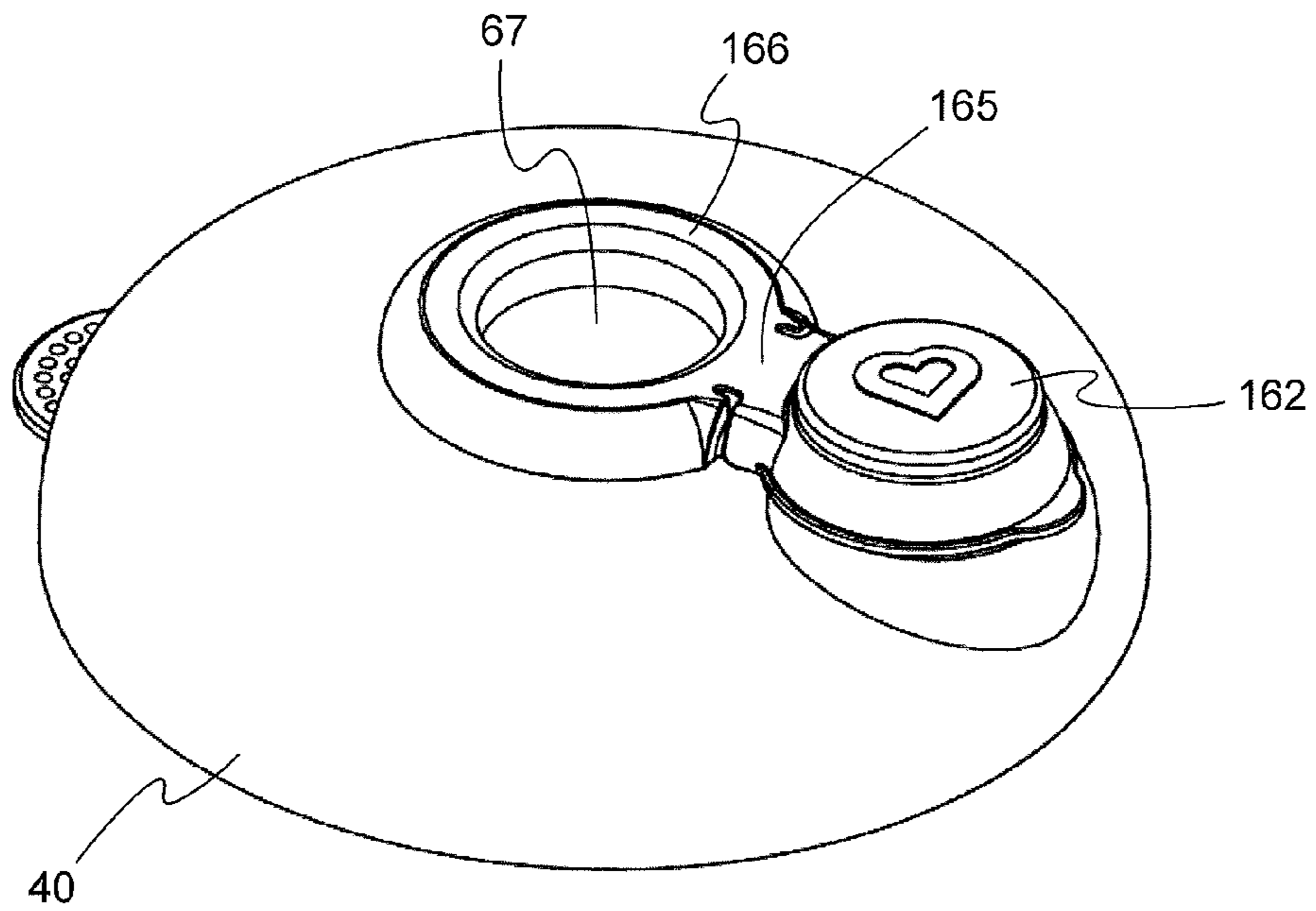


FIG. 25

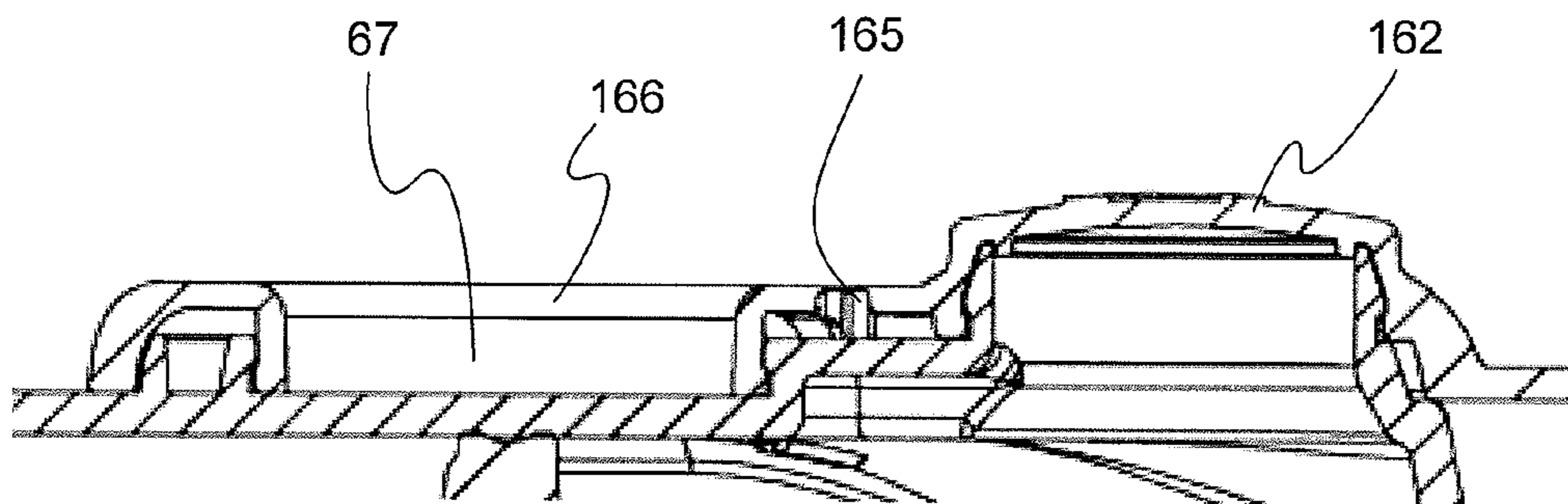


FIG. 26

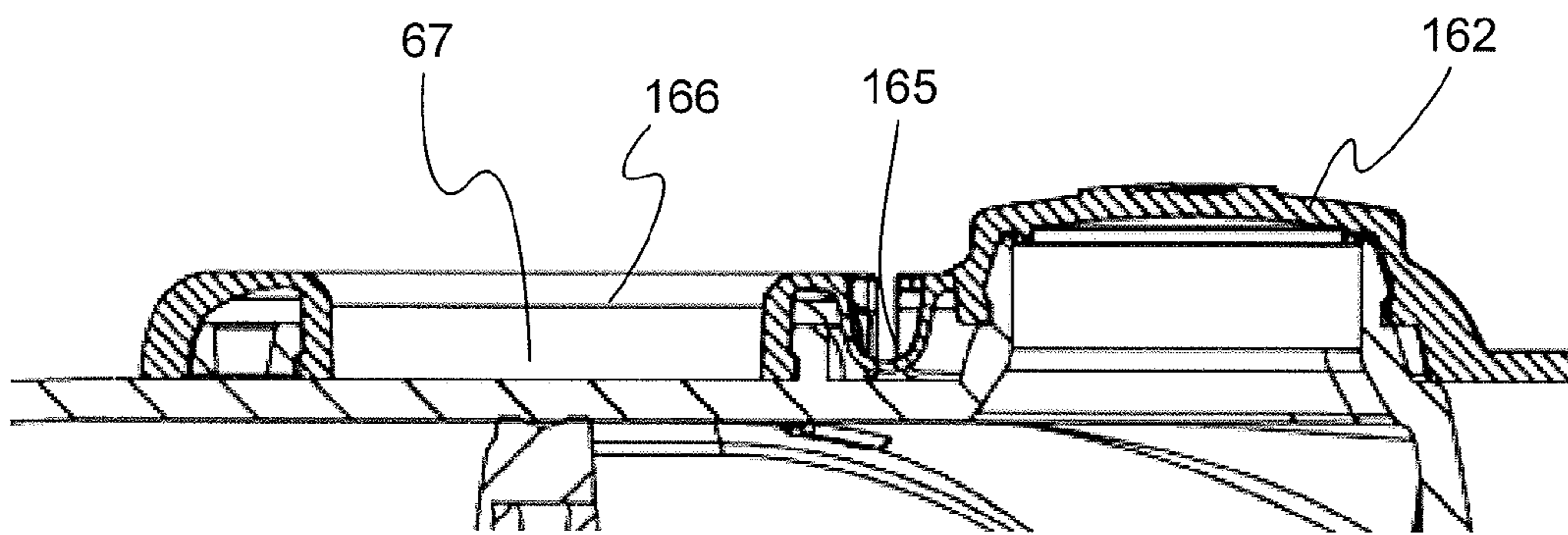
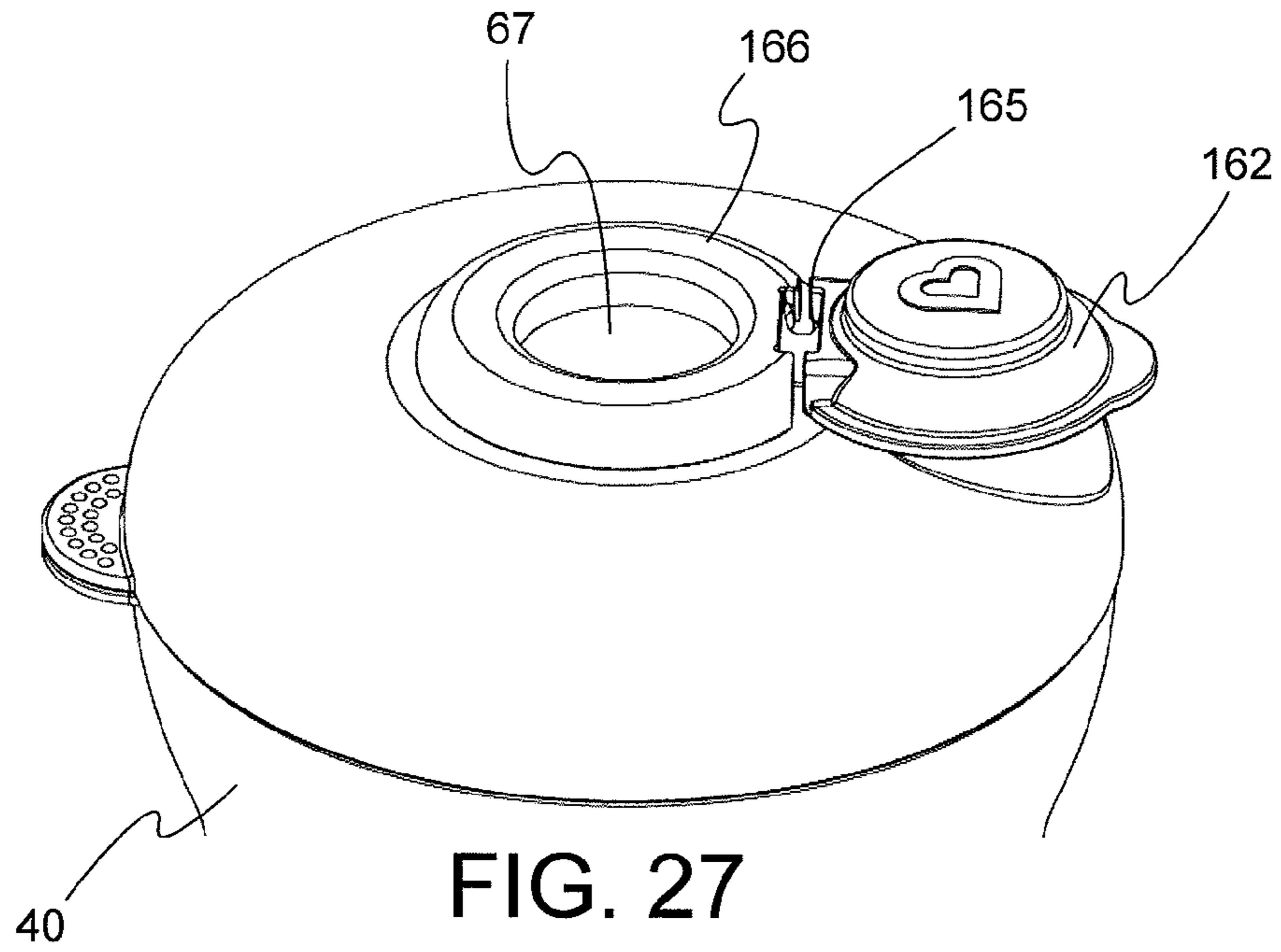


FIG. 28

MULTI-COMPARTMENT CONTAINER WITH FLEXIBLE PARTITION

CROSS REFERENCE TO RELATED APPLICATION

This application claims priority to U.S. patent application Ser. No. 14/470,659 filed Aug. 27, 2014; U.S. Provisional Application Ser. No. 62/072,200 filed Oct. 29, 2014, and U.S. Provisional Application Ser. No. 62/000,974 filed May 20, 2014 and to U.S. Provisional Application Ser. No. 61/909,341 filed Nov. 26, 2013; the contents of all of which are hereby incorporated by reference herein in their entirety into this disclosure.

TECHNICAL FIELD

The subject disclosure relates generally to a small item container and, more particularly, to a multi-compartmented dispenser having various spout covers for various spouts.

BACKGROUND

Parents on the go often times have to contend with packaging and carrying premeasured formula and cereal outside of the home. Consequently, meeting the dietary needs of a small child while traveling away from home can be quite challenging and complicated for a parent or caregiver.

Conventionally, various containers having multiple compartments have been used to separate different baby formulas or other granulated food items. However, these containers have the tendency to cross contaminate the contents of the various separated items disposed in each of the compartments. When conventional containers are flipped over to dispense the formula, or are tossed about when moved or carried, the premeasured contents from one compartment will often leak into an adjacent compartment and contaminate the contents therein.

Thus, there is a long-standing need to have a container configured to effectively address these needs.

BRIEF DESCRIPTION OF THE DRAWINGS

Various exemplary embodiments of this disclosure will be described in detail, wherein like reference numerals refer to identical or similar components or steps, with reference to the following figures, wherein:

FIG. 1 illustrates an exploded view of an exemplary multi-compartment container assembly according to the subject disclosure.

FIG. 2 depicts an exploded view of another exemplary multi-compartment container assembly according to the subject disclosure.

FIG. 3 shows a side view of the multi-compartment container assembly.

FIG. 4 illustrates a top view of the container.

FIG. 5 depicts a cross section view of the multi-compartment container assembly about line A-A in FIG. 4.

FIG. 6 shows a cross section view of the multi-compartment container assembly about line B-B in FIG. 3.

FIG. 7 illustrates a side view of the container and the upper end of the partition extending in a convex configuration above the top peripheral edge of the container.

FIG. 8 shows an upper perspective view of the multi-compartment container assembly with the spout cover in a partially open position.

FIG. 9 depicts an upper perspective view with the spout cover in a fully open and locked position.

FIG. 10 shows an exploded exemplary view of the connection between the container and the lid.

FIG. 11 illustrates an exploded view of the flexible partition unit lifted off of the remainder of the partition according to the subject disclosure.

FIG. 12 depicts another exploded view of the multi-compartment container assembly.

FIG. 13 shows an upper perspective view of the multi-compartment container assembly.

FIG. 14 depicts an exploded view of the flexible partition unit lifted off of the remainder of the partition according to the subject disclosure.

FIG. 15 shows a side view of the multi-compartment container assembly.

FIG. 16 illustrates a cross section view of the multi-compartment container assembly about line C-C in FIG. 15.

FIG. 17 depicts an exploded partial view of the connection between the container and the flexible partition as shown in FIG. 16.

FIG. 18 shows a top view of the multi-compartment container assembly.

FIG. 19 illustrates a cross section view of the multi-compartment container assembly about line D-D in FIG. 18.

FIG. 20 depicts a partially transparent side perspective view of the container and the upper end of the partition extending in a convex configuration above the top peripheral edge of the container.

FIG. 21 shows an exploded view of the multi-compartment container assembly having multiple spouts.

FIG. 22 illustrates a perspective view of an open multi-compartment container assembly having multiple spouts.

FIG. 23 depicts a perspective view of the open multi-compartment container assembly having various spouts open simultaneously in a nested manner.

FIG. 24 shows a top view of a multi-compartment container assembly having various configurations for the multiple spouts.

FIG. 25 depicts a top perspective view of a spout with a flat hinge construction.

FIG. 26 illustrates a cross section view of a spout with the flat hinge construction.

FIG. 27 depicts a top perspective view of a spout with a u-shape hinge construction.

FIG. 28 illustrates a cross section view of a spout with the u-shape hinge construction.

DETAILED DESCRIPTION

Particular embodiments of the present invention will now be described in greater detail with reference to the figures.

FIG. 1 illustrates an exploded view of multi-compartment container assembly 10. The container assembly 10 includes a container 20 with a non-spill lid 40. Various granular or small items can be used with the container assembly, including but not limited to for example, formula, crackers, cookies, chopped fruits, vegetables, popcorn, shelled nuts, potato chips, dry cereal, candies, raisins or other granular or small snack food.

The container 20 may be configured in any size or shape. As shown, the container 20 is in the shape of a bowl. As shown in FIG. 2, the container 20 may include various gripping indentations 30 disposed along a side wall 22 of the bowl-shaped outer surface. The gripping indentations 30 may be disposed radially symmetric around the circumference of the container 20 to improve grippability of the bowl

by a user. Texture may be provided to the gripping indentations 30 on side wall 22 of the container 20 or lid 40 to promote a low-slip surface and promote a firm grip via the indentations 30 or the like.

The container 20 includes the bowl-shaped wall 22. The container 20 has a lower closed end 24 and an open upper end 24a. The inner cavity of the container 20 defines an interior space divided into a plurality of sub-compartments 14, 16 and 18. The interior space of the container 20 is divided into each of the sub-compartments 14, 16 and 18 by radially extending partitions 50. The radially extending partitions 50 extend radially outward from a center 52 of the container 20 and upward to a top peripheral upper end 27 that scrapes, flexes and/or swipes against an inner surface of the lid 40, when the lid 40 is secured to the container 20.

FIG. 3 is a side view that illustrates the lid 40 has a domed shaped construction. The lid 40 is attached to the container 20 by a snap fit attachment, as shown in FIGS. 6 and 10 and discussed in greater detail below. As such, the lid 40 can rotate concentrically over the top open end of the container 20 so that a spout 60 can be rotated over one of the various sub-compartments 14, 16, 18 for dispensing of the contents therein.

Although the lid 40 is attached to the container 20 by a snap fit attachment, it is to be understood that the lid 40 may be attached to the container 20 via a threaded fastener fit and/or any suitable means used to detachably secure the lid 40 to the container 20. In this event, another portion of the lid 40 may be provided to rotate the spout 60 over each of the various sub-compartments 14, 16, 18.

FIGS. 3-6 show the various radially extending partitions 50. Each of the radially extending partitions 50 are constructed integral with each other, and have inner peripheral ends 21 that meet at the center 52 of the container 20. Outer peripheral ends 23 of the radially extending partitions 50 merge integral with an interior surface 25 of the bowl-shaped wall 22. A lower end 26 of the partitions 50 merge integral with a lower end 24 of the bowl-shaped wall 22 of the container 20. The container 20 is capable of being formed in the usual manner of the formation of such containers such as by molding or the like.

An upper end 27 of the individual radially extending partitions 50 is composed of a resilient flexible material capable of flexing at the upper end 27 against an inner surface 42 of the lid 40. That is, as shown in FIGS. 5 and 6, when the lid 40 is secured to the container 20, the upper ends 27 of the radially extending partitions 50 are biased against the inner surface 42 of the lid 40. The upper ends 27 of the partitions 50 are slightly deformed against the inner surface 42 of the lid 40 such that the upper ends 27 of the partitions 50 act as a seal for contents provided in the various sub-compartments 14, 16, 18.

The advantage to providing flexible upper ends 27 to the partitions 50 is to prevent the contents of one of the sub-compartments 14, 16, 18 from bleeding over the top edge of a partition 50 into an adjacent sub-compartment 14, 16 and 18. The lid 40 is adapted to rotate a spout 60 over, and in alignment with one of the various sub-compartments 14, 16 and 18 within the container 20. As the lid 40 rotates, the flexible upper ends 27 of the partitions 50 act like a squeegee or wiper blade swiping against the inner surface 42 of the lid 40 by scraping the inner surface 42 of the lid 40 thereby sealing the various sub-compartments 14, 16 and 18 from each other within the container 20.

Partitions 50 may also be removable from the container 20. In this way, both partitions 50 and center post 52 may be flipped upside down and placed back into container 20 in a

mirrored position. The lower edge 26 of the partition may also be flexible such that when the partition 50 is flipped the previously positioned lower edge 26 may act as the flexible upper ends 27.

FIGS. 5-7 show the flexible upper ends 27 of the partitions 50 may be convex in shape. When viewed from the side, as in FIG. 5, the flexible upper end 27 may be generally flat at a proximal end 71 and gradually curve downward when approaching an outer peripheral end 79. Similarly, the inner surface 42 of the lid 40 has a mating shape symmetric to the convex shape of the flexible upper ends 27 of the partitions 50. The flexible upper ends 27 of the partitions 50 and the mating inner surface 42 shape of the lid 40 provides a smooth and continuous convex surface for engagement. The engagement therefore provides a continuous seal between the flexible upper ends 27 and the lid 40.

FIG. 8 depicts a spout cover 62 in a partially open position, and FIG. 8 shows the spout cover 62 in a locked open position. In use, the spout 60 in the lid 40 is rotated over the sub-compartments 14, 16 and 18 within the container 20. Referring back to FIG. 2, the spout cover 62 is capped over a mouth 64 of the spout 60 in a closed position. As shown in FIGS. 8 and 9, in a partially and completely open position, the spout 60 is aligned with one of the various sub-compartments 14, 16 and 18 and the spout cover 62 is lifted off of the mouth 64 of the spout 60 allowing the contents within the sub-compartment 14, 16 18 aligned with the mouth 64 of the spout 60 to flow through the mouth 64 when tipped over.

FIGS. 2 and 8-9 show the spout cover 62 hingedly connected to a concentric housing 66 disposed on a top of the lid 40. That is, the spout lid 62 is connected by a pivoting flexible strap 65 to a concentric housing 66 attached to the lid 40. The concentric housing 66 includes a recess 67 that is adapted to securely receive the upper end 62a of the spout lid 62 when the spout lid 62 is pivoted into an open position. The upper end 62a of the spout lid 62 (as shown in FIG. 8) has a contour adapted to snugly fit within the recess 67 of the concentric housing 66 (as shown in FIG. 8). The spout cover 62 may also include a lifting tab 62b to facilitate moving the spout cover 62 from the open position to the closed position and vice versa.

The flexible strap 65 may be selected from a variety of flexible materials, such as a polymer, rubber and/or other suitable material capable of enduring repetitive bending or folding back and forth from a closed position (as shown in FIG. 2), to a partially open, and fully open stored position (as shown in FIGS. 8-9 respectively).

Referring back to FIGS. 1-3, tabs 31 and 41 may be provided on the container 20 and the lid 40 respectively. The tabs 31 and 41 allow a user to more easily separate the lid 40 from the container 20 or rotate lid 40 to line up the spout 60 with openings 14, 16, 18. A plurality of small protuberances or gripping nubs 45 may be provided on the tabs 31, 41 as a convenient way for a user to grip on to the various tabs 31, 41 while in use.

FIG. 10 illustrates an exploded view of the exemplary snap-lock connection made between the container 20 and the lid 40. The container 20 includes a notched edge 46 and a projection lip 47 adjacent to the upper opening of the container 20. The lid 40 includes a mating notched edge 48 end adapted to matingly engage and captivate the notched edge 46 on the container 20. When a snap fit connection is made between the lid 40 and container 20, a peripheral end 49 of the lid 40 rests against the projection lip 47 on the

container 20. It is to be understood that various other suitable connections may be made between the container 20 and the lid 40.

The lower end 24 of the container 20 is shown (FIGS. 2 and 5-6) flattened out generally conforming to a flat surface (like a table) upon which the lower end 24 of the container 20 may be placed. Likewise, the lower end 26 of the partition 50 may also be flat in construction.

The flexible upper edge 27 of the partition 50 may be integrated in a variety of different ways. For example, the upper edge 27 of the partition 50 can be co-molded, fused or attached in any suitable manner onto an upper wall 50a of the partitions 50, as will be shown and discussed below. Likewise, the entire partition 50 can be made of the flexible material such that the upper edge 27 of the partition 50 is thinner and adapted to flex more than the lower end of the partition 50. However, it is to be understood that the upper edge 27 of the partition 50 may be constructed in any suitable manner according to this subject disclosure.

FIG. 11 shows that the flexible upper edge 27 may be constructed as a single flexible unit 70 adapted to fit over the top of an upper end of the various partitions 50 and the center post 52. As before, the upper edge 27 of the flexible unit 70 has the same convex contour as the inner surface 42 of the lid 40 and is adapted to fit on top of an upper wall 50a of the partition 50.

In particular, the upper wall 50a on the partition 50 shown in FIG. 11 and cross section view FIG. 6 includes a plurality of guide projections 72. The plurality of guide projections 72 are adapted to fit securely within a recess 74 within the flexible unit 70. A central cap 77 is adapted to fit over a central alignment projection 76 provided at the center post 52 of the partitions 50. That is, the central cap 77 and recess 74 in a lower end 78 of the flexible unit 70 are aligned with, and placed onto the central alignment projection 76 and the projections 72 in a secure manner. It is to be understood that the flexible unit 70 may be permanently attached to the upper wall 50a of the partitions 50.

Alternatively, the flexible unit 70 may be removably attached to the upper wall 50a of the partitions 50. The lower end 78 of the flexible unit 70 may be constructed substantially rigid to be securely connected to a rigid partition 50 at the upper wall 50a. The upper edge 27 may be co-molded or attached to the lower end 78 of the flexible unit in the manner shown in FIG. 11. Although the partitions 50 are shown having a curve in the radial extension, it is to be understood that the partitions 50 may be straight, curved, or various other shapes.

When viewed along axis A in FIG. 11 (and as shown in top view FIG. 4), the partitions 50 and flexible upper ends 27 may be radially curved in a counter-clockwise direction. An advantage of providing curved partitions 50 is to enhance the sweep angle and increase the connectivity of the flexible upper ends 27 to the inner surface 42 of the lid 40 during relative rotation of the lid 40 and container 20. It is to be understood, however, that the partitions 50 and flexible upper ends 27 may be curved in other configurations or be straight.

FIGS. 12-13 show another perspective view of the multi-compartment container assembly 10. The construction for the container assembly 10 is similar to the embodiments described above with minor changes. Here, the flexible unit 70 is fused with the partition 50, as will be discussed in greater detail below.

FIG. 14 illustrates an exploded view of the flexible unit 70 lifted off of the remainder of the partitions 50. FIG. 17 further shows an enlarged view of the flexible unit 70 over

the guide projections 72 of the partitions 50. Here, the lower end 78 of the flexible unit 70 acts as an interconnecting end and is slightly thinner than a midportion of the flexible unit 70 and extends downward, towards the container 20. The lower end 78 of the flexible unit 70 is adapted to matingly sit flush with the guide projection 72, which similarly is slightly thinner than and extends upwardly from the partition 50.

FIG. 15 shows a side view of the container 10. Here, the side-wall 22 may be slightly narrowed and/or concave. As such, a user may concentrically wrap his or her fingers around the container in a gripping fashion.

FIGS. 15-17 depict the mating connection between the lower end 78 of the flexible unit 70 and the guide projection 72 in greater detail. FIGS. 16-17 show an enlarged cross section of the container assembly 10. The lower end 78 of the flexible unit 70 matingly interconnects with and lies flush with the guide projection 72. An edge 70a of the flexible unit 70 rests against the guide projection 72 and the upper wall 50a of the partition 50 rests against the lower end 78 of the flexible partition 70. In addition, the lower end 78 may rest against a first side (left side) of the guide projection 72, as shown in FIG. 17. Alternatively, the lower end 78 may rest against the right side of the guide projection 72 as shown in FIG. 1. In an even different embodiment, the lower end 78 may be constructed to rest on both sides of the guide projection 72 as shown in FIG. 2, or in any other suitable configuration to connect the flexible unit 70 with the partitions 50. Furthermore, apertures or holes (not shown) may be disposed within the guide projection 72 to lock in the flexible unit 70.

The attachment construction for the flexible unit 70 as shown in FIG. 12 is the mirror construction of the flexible unit 70 as shown in FIG. 1. When the lid 40 is rotated about the container 20, the inner surface 42 of the lid 40 applies a force against the upper edge 27 of the flexible unit 70 in either a clockwise or counter-clockwise direction depending on the direction of the lid 40 being rotated. When rotating the lid 40 in a clockwise direction, an advantage of the configuration as shown in FIG. 12 is to provide the upper end 27 with support from the guide projection 72 against the force applied by the lid 40. When the lid 40 is rotated in a counter-clockwise direction, an advantage of the configuration as shown in FIG. 1 is to provide the outer peripheral end 79 additional support from the guide projection 72. This helps prevent the upper end 27 from being overly distorted by the outer peripheral end 79 being bent by the lid 40 during rotation.

An adhesive may be applied to either the lower end 78 or the mating surface on the guide projection 72 in order to facilitate the secure mating connection of the flexible unit 70 to the partitions 50. Similarly, the flexible unit 70 and the partitions 50 may be co-molded or fused by any other suitable attachment method as previously discussed. Referring back to FIG. 14, in this manner, the central cap 77 may be secured to the container 20 by resting or butting up against, and in alignment with the center post 52 of the container 20, as opposed to being secured over by the central alignment projection 76 provided in a recess below the central cap 77 (such as shown in FIG. 11).

As before, and as shown in FIGS. 18-20, the flexible upper edge 27 of the partition 50 is biased against the inner surface 42 of the lid 40. In this way, the upper edge 27 acts as a seal between the various sub-components 14, 16, 18 to prevent material disposed within any one sub-compartment 14, 16, 18 from contaminating other substances in any of the other sub-compartment 14, 16, 18.

Furthermore, at least one alignment tab **44** may project from the lid **40** towards the inside of the container **20**. The tab **44** may act as both a visual and tactile alignment indicator, giving the user feedback as to when the spout **60** is centrally isolated over a single sub-compartment **14, 16, 18**. When the user rotates the lid **40**, the upper edge **27** of the flexible unit **70** will slightly flex over the tab **44** when the spout **60** is clear of the partitions **50**, which will provide the tactile feedback.

In addition, there could be multiple tabs **44** which may project into the container on either side of the flexible unit **70** when the spout **60** is clear of the partitions **50**. This will not only slightly hold the lid **40** in this position, but will provide feedback if the lid **40** is rotated both counter-clockwise and clockwise.

FIG. **21** shows the lid **40** having multiple spouts **160a, 160b, 160c** which correspond to each compartment **14, 16, 18**. In this configuration, the user may lift one of the spout covers **162a, 162b, 162c** to access the contents of the corresponding compartment **14, 16, 18** without needing to rotate the lid **40**. Each spout cover **162a, 162b, 162c** may be independently connected by pivoting flexible straps or living hinge **165a, 165b, 165c** to a concentric housing **166** attached to the lid **40**. It is to be understood that the spout covers **162a, 162b, 162c** may also be connected to the spouts **160a, 160b, 160c** by a threaded fastener fit, snap fit, or other suitable connection. The concentric housing **166** includes a recess **167** that is adapted to securely receive one of the spout covers **162a, 162b, 162c**, whichever is in an open position. The spout covers **162a, 162b, 162c** may also include at least one tab **163** which radially projects therefrom. It is to be understood that this embodiment incorporates many or all of the features previously discussed herein.

When one spout cover **162a, 162b, 162c** is in the open position, the lid **40** may be configured to prevent the remaining spout covers **162a, 162b, 162c** from opening. In a first configuration, the open spout cover **162a, 162b, 162c** may be secured to the recess **167** which will prevent any other spout cover **162a, 162b, 162c** from additionally being received by the recess **167**. In a second configuration, when the open spout cover **162a, 162b, 162c** is received by the recess **167**, the tabs **163** of the open spout cover **162a, 162b, 162c** may project outwards over the opposing pivoting flexible straps **165a, 165b, 165c**, thereby effectively preventing the closed spout covers **162a, 162b, 162c** from opening.

FIG. **22** shows an example in which the spout cover **162a** is opened and secured by the recess **167**. The tabs **163** may project outwards and rest against an upper surface of the pivoting flexible straps **165b, 165c**. If the user attempted to open either spout cover **162b, 162c**, the tab **163** would prevent it from pivoting open.

FIG. **23** illustrates an alternative where the spout covers **162a, 162b, 162c** may be able to nest above recess **167** if multiple spout covers **162a, 162b, 162c** are open simultaneously. By way of example shown in FIG. **23**, if spout cover **162a** is opened and secured by the recess **167**, an underside of the spout cover **162a** may form a recess which is adapted to receive and secure a secondary spout cover **162b** (shown herein) or **162c**.

Multiple dividers **50** separate the compartments **14, 16, 18** and may terminate at an upper edge **127** at an upper end **170** of the dividers **50**. As shown in FIG. **21**, the upper edge **127** may engage the underside of the lid **40** in the same manner as previously discussed with respect to FIGS. **1-20**. However, the underside of the lid **40** may also include grooves **172** (as shown in FIG. **21**) that sealingly secure and receive

the upper edge **127** of the divider **50**. In this fashion, the upper edge **127** abuts against the groove **172** and forms a seal between the compartments **14, 16, 18**. The groove **172** may be lined with a flexible or soft material, one capable of being deformed by a rigid upper edge **127** to form the seal. Alternatively, the upper edge **127** may be flexible or soft and slightly deform or flex within the groove **172** to form the seal. The connection between the grooves **172** and upper edges **127** may be any suitable connection capable of forming a seal preventing fluid communication between compartments **14, 16, 18**.

The tabs **31, 41** may facilitate aligning the upper edges **127** with the grooves **172**. In addition, the lid **40** may be transparent such that an outline of the grooves **172** may be seen from the top of the lid **40**, which further facilitates aligning the upper edges **127** with the grooves **172**.

FIG. **24** shows each spout **160a, 160b, 160c** may be configured to have different shapes or sizes. When dispensing the contents of the particular compartment **14, 16, 18**, the user may wish to pour more or less and alter a dispensing flow rate. For instance, spout **160a** may have a smaller diameter opening (or various openings) than spout **160b**, and the spout **160b** may have a smaller diameter opening than spout **160c**. In this configuration, the user may rotate the lid **40** to align a certain sized and shaped spout **160a, 160b, 160c** over a particular compartment **14, 16, 18** to change how quickly the contents are being dispensed. In addition, each spout **160a, 160b, 160c** may have a different type or grade filter or mesh, which prevents different sized granules from being dispensed. The spout covers **162a, 162b, 162c** may also be perforated in different manners to vary the dispensing of the contents of the container assembly **10**.

FIGS. **25-28** illustrate that the pivoting flexible straps **165** may also be constructed in a variety of different constructions. Such as shown in FIGS. **25-26**, the pivoting flexible strap **165** is a flat hinge configuration in which the strap **165** extends between the spout cover **162** and the concentric housing **166** that is adapted to securely receive the upper end of the spout lid **162**. Alternatively, FIGS. **27-28** show the pivoting flexible strap **165** having a u-shaped hinge configuration in which the strap **165** extends downward into a u-shape configuration between the spout cover **162** and the concentric housing **166**.

The container assembly **10** may be preferably made of an unbreakable material, such as a polymer, a metallic composition and or any other suitable material normally employed for packaging small food items. The container assembly **10** may be either opaque or transparent. The container assembly **10** may be composed of a rigid material made preferably of a transparent plastic so as to permit viewing of the food item contained therein. The container assembly **10** may take any number of different sizes and shapes, such as cylindrical, bowl shaped, square, frusto-conical shaped side walls, a circular flat bottom and/or any other suitable shape in accordance with the present disclosure.

Various materials, for example, may include thermoplastic polyurethane (TPU) or thermoplastic polyesters (TPE), polyolefin Elastomers (POE). Other commercially available materials may include Engage, Sarlink, Texin, Desmopan, Dynaflex, Versalloy, Versaflex, and Elastolan. It should be noted that some or all of the above commercially available materials may be trademarks of the companies' manufacturing and/or selling the materials.

Although the container assembly **10** has been described as an anti-spill container assembly for storing and dispensing an infant formula, it will be understood that container assembly **10** has a variety of other uses. For example,

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container assembly 10 could also be used as a container for small non-food items, such as a jewelry container, a coin change container, a small hardware parts container assembly and/or any other suitable use for carrying and preventing the spillage of various items. As such, the anti-spill container assembly may be implemented in a virtually unlimited number of different applications.

Various changes and modifications to the embodiments herein chosen for purposes of illustration will readily occur to those skilled in the art. To the extent that such modifications and variations do not depart from the spirit of the invention, they are intended to be included within the scope thereof which is assessed only by a fair interpretation of the following claims.

What is claimed:

1. A dispensing cover, comprising:
a lid having at least two or more spouts adapted to be aligned with two or more subcompartments of a container; and
at least two or more spout covers hingedly connected to a base that is attached to the lid,
wherein the base has a recess adapted to securely receive and secure a portion of the spout covers in an open position.
2. The dispenser cover as recited in claim 1, wherein the base is concentric and the spout covers have an outer concentric shape configured to friction fit within the recess in the open position.
3. The dispenser cover as recited in claim 1, wherein the spout covers are hingedly connected to the base by a pivoting flexible strap.
4. The dispenser cover as recited in claim 3, wherein the pivoting flexible strap is substantially flat between the base and the spout covers.
5. The dispenser cover as recited in claim 3, wherein the pivoting flexible strap is u-shaped between the base and the spout covers.
6. The dispenser cover as recited in claim 1, wherein each of the spout covers:
has a pivoting flexible strap, and
shares the recess in the base to secure the respective spout in the open position.
7. The dispenser cover as recited in claim 6, wherein when at least one of the spout covers is placed in an open position, the other spout cover is trapped closed and cannot be opened.
8. The dispenser cover as recited in claim 6, wherein when a first spout cover is friction fit within the recess within the base in the open position, a second spout cover is friction fit within an inner recess within the first spout cover in a nested configuration.
9. A dispensing cover, comprising:
a lid having at least two spouts; and

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at least two spout covers hingedly connected to a base that is attached to the lid, each of the spout covers having a pivoting flexible strap disposed between the base and the spout covers respectively, and wherein the base has a recess adapted to receive and secure one or more of the two spout covers in an open position.

10. The dispenser cover as recited in claim 9, wherein the base is concentric and the spout covers have an outer concentric shape configured to friction fit within the recess in the open position.

11. The dispenser cover as recited in claim 9, wherein when at least one of the spout covers is placed in an open position, the other spout cover is trapped closed.

12. The dispenser cover as recited in claim 9, wherein when a first spout cover is friction fit within the recess within the base in the open position, a second spout cover can be friction fit within an inner recess within the first spout cover in a nested configuration.

13. A container assembly, comprising:
a container having at least one partition separating the container into at least two subcompartments;
a lid having two or more spouts adapted to be aligned with the subcompartments; and
a spout cover having two or more spout covers aligned with the spouts and being hingedly connected to a base, wherein the base is attached to the lid and has a recess adapted to receive and secure via a friction fit a portion of the spout covers in an open position.

14. The container assembly as recited in claim 13, wherein the base is concentric and the spout covers have an outer concentric shape configured to friction fit within the recess in the open position.

15. The container assembly as recited in claim 13, wherein the spout covers are hingedly connected to the base by a pivoting flexible strap respectively.

16. The container assembly as recited in claim 15, wherein the pivoting flexible strap is configured as a flat strip or a u-shaped strip between the base and the spout cover.

17. The container assembly as recited in claim 13, wherein each of the spout covers has a pivoting flexible strap and shares the recess in the base to secure the respective spout in the open position.

18. The container assembly as recited in claim 13, wherein when at least one of the spout covers is placed in an open position, the other spout cover is trapped closed and cannot be opened.

19. The container assembly as recited in claim 13, wherein when a first spout cover is friction fit within the recess within the base in the open position, a second spout cover is friction fit within an inner recess within the first spout cover in a nested configuration.

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